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THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.

Published Monthly by Madison Cooper, Calcium, New York.

Vol. I.

JANUARY, 1914

No. 1

GROWTH.

One of the most vigorous and easily grown Gladioli known. Strong and healthy, with luxuriant dark green foliage and with a great freedom of growth and flowering.

FLOWERS.

Spikes two to three feet long, erect with a great number of large spreading blossoms, all facing one way and showing a color of delicacy and beauty. It is an exquisite soft lavender pink.



GLADIOLUS "AMERICA."

very light, almost a tinted white; the color is the same as seen in the most exquisite Cattleya Orchids.

USEFULNESS.

As a cut flower it will last in water for a week or more, the great blossoms retaining full size and delicate coloring. Especially valuable for florists' use and for bedding.

FOR FORCING.

'America' forces easily and is one of the most profitable varieties for that purpose.

Easily the greatest success of any Gladiolus introduced during recent years. It has secured many prizes and awards at the various shows and exhibitions both at home and abroad. "America" is still extremely popular and among the very highest in quality.

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From the Florists' Exchange, New York.

The Gay Gladiolus.

BY I. S. HENDRICKSON.

First, how shall we pronounce it, Glad-i-ó-lus or Glad-i-o-lus? Personally, I have always clung to the old fashioned way, for I consider it much easier to say, and as far as I know, it is the same kind of a word as gladiator, and no one thinks of putting the accent on the "i" in that word; but with all this aside, we find that just plain "Glads" answers the purpose when they are selling for 50c. a hundred, and sometimes a drug on the market even at that price.

As we look back over the past, great changes have taken place in this genus as well as in all other kinds of bulbs. The time is not far distant when Gladioli occupied a very small part of the seedsmen's catalogs, or the florists' attention, and this particularly in America, but now no catalog is complete without a page or more of varietal names, and the florist has come to find out that they are a very satisfactory crop for him. The gardeners, too, no longer consider the Gladiolus as common, but are planting more and more each year.

There was a time when it was thought by some that it was not worth while to segregate, and give names to varieties, but that time has passed, and now it sometimes seems that we are "name crazed," and of course we all think our own children the best. I believe I am safe in saying that the advent of "America" made Gladioli famous, and while several growers claim to be the originator of it, we are to give Mr. Banning the credit for working up a stock for introduction. And this brings back to our mind the discussion that was carried on a few years ago in the trade papers over its origin. While at the time there may have been some bitterness in the remarks, yet I am sure we know now that it did more for "America," and Gladioli in general, than pages of straight advertising could have. "America" has made good, for it was, and is, ideal in color and form, in short, it is *the* variety for all purposes. The general wish now is for a white variety of equal quality, and while there are many bidding for first place, there seems to be some fault in nearly every one.

THE OLD SNOW WHITE.

I suppose the old variety Snow White, when in its prime, was nearly ideal, but it became sickly and went the way of the

rest. Augusta has had to be relied upon as the nearest approach to a profitable white for many years, and its future value is not impaired yet. This variety brings to our memory the late E. V. Hallock, one of the first men in this country to see the value of these flowers. He was most painstaking in his work, and it is a testimony to his judgment when we note that some of his seedlings are still in commerce after twenty-five years. Augusta originated on his place near Floral Park, and was named after the wife of his foreman, Leonard Joerg, and is now known the world over. The variety Snow White originated near Boston, and the stock was bought by Mr. Hallock, and introduced to the trade.

In the striped and variegated class, Shakespeare and May have stood the test of time. To Matthew Crawford belongs the honor of originating May, and if there was such a thing as paying royalty for new bulbs and plants, as is paid for writing books, Mr. Crawford's share would have been considerable.

From a florist's standpoint the old Brenchley is: : : : : to be a standby in red and t : : : : being in commerce for more than fifty years, it being introduced by the firm of Youell & Company, Norfolk, England.

YELLOWS AND BLUES.

In yellow we have Sulphur King as the nearest approach to the ideal in color, but the flowers are small. There are a number of varieties that are offered as yellow, with very large flowers, but none, as far as I know, are of true yellow, unless it is Kelway's Golden Measure that sells for \$25 a bulb! It is a flower that I have not as yet seen.

For some reason we have all been anxious to secure a good blue, and have been offering what we call blue varieties under the names Baron Hulot, Viola, Heliotrope, and Badenia, but when we come down to real facts they are only "near blues." Perhaps Badenia is the most beautiful of all, being a rich lavender-blue, if there is such a color. It is of German origin, and a little weak in constitution, which seems to be true of all odd or off colors. The last ten years have brought out some wonderful and beautiful varieties which prove that the future outlook for the Gladiolus is even better than the past.

EUROPEAN KINDS NOT VIGOROUS.

One thing to be regretted is the poor growing qualities of some European varieties, for some of them are simply wonderful as flowers. For instance, if Sanspareil could be grown as easily as America it would create a demand that could hardly be satisfied, as it is one of the most strikingly beautiful combinations of colors imaginable. The flowers are large, and the spikes are of perfect form; the color is orange-rose with touches of true vermilion; the throat has a large white blotch. Altogether it is remarkable, to say the least. Then there are Eucharis, Europa, Ruth Mercier, and many others, and how we hate to give them up, but after several years' testing, it is useless to try to stock them. On the other hand we have some real good ones from Europe that are healthy, such as Baron Hulot, Charlemagne, Jane Dieulafoy, Le Triomphe, Negerfurst, Reine Blanche, and Safrano.

AMERICAN VARIETIES.

Our American growers have given us many that are worth while. I will cite a few: Banning's Niagara and Panama; Childs' Alaska, Attraction, Blanche, Cardinal, Dawnray, Fireking, Melrose, Nezin-scott, Prince of India, Scribe, Wild Rose, Wm. Falconer, Contest and Sulphur King; Groff's Blue Jay, A. Lina, Peace, Rosella; Kunderd's Mrs. F. Pendleton and Myrtle; Miller's Fascinator and Charmer; Coblentz's Mrs. F. King and Van Fleet's Princess.

Last year there was a craze in Holland, and exorbitant prices were reported to have been paid for seedlings and for scarce named varieties, but this has somewhat died out, and conditions have settled down to a normal basis again.

There has been a great change in the method of using Gladioli for decoration, and Mrs. B. H. Tracy has demonstrated how they can be used for almost any kind of decoration, especially with baskets, and she deserves much credit for bringing about this much desired advancement. One decoration I have in mind was very striking, and while it may not have been new to every one, it was to me, and that was to combine the old variety Brenchleyensis with highly colored Autumn leaves; the effect was splendid.

In common with Orchids, Roses, Chrysanthemums, etc., the Gladiolus now has several societies devoted to its welfare, and I think no flower has any more earnest and enthusiastic advocates. Gladioli have at last "come into their own."

Gladioli in a Dry Season.

Written expressly for The Modern Gladiolus Grower

BY JOE COLEMAN.

Last season was a very trying one on account of the extremely dry weather in nearly all sections of the country. The amateur and professional grower suffered alike unless extra precautions had been taken. Personally we had little trouble and did not use water on the field at any time. In most parts of the country during a prolonged drought a good spike of flowers may be grown if the ground is thoroughly cultivated at all times, never allowing a crust to form. Our success has been assured by pushing the plow morning, noon and night if necessary to keep a dust mulch, and by so doing the moisture in the ground cannot escape. It is best never to water your beds unless you can give them a thorough soaking, say five barrels to the square rod. Not one person in a hundred uses anywhere near this amount, and, as usually done, it might better be left undone. After the ground is thoroughly soaked care should be taken that the surface is loosened before a crust is allowed to form. Another common mistake is planting along the house under the eaves and sometimes never cultivating. Better plant out in the garden in the warm sunshine and the Gladiolus Beautiful will respond beyond your greatest expectations if only ordinary "horse-sense" is used in care.

Mr. Maurice Fuld, through whose efforts the American Gladiolus Society was organized, and who for some years held responsible positions in Boston and Philadelphia, has been chosen vice-president of the Knight & Struck Co. of New York and Flushing, L. I. The cultivation of gladioli will be a specialty with the firm. Doubtless we shall see some of their products at the shows next summer. The many friends of Mr. Fuld offer him congratulations and best wishes in his new field.

It is suggested that those who receive this issue of THE MODERN GLADIOLUS GROWER preserve it for future reference, and send in their subscription at once. At the end of the year a carefully prepared index will be sent and the facts and information which have appeared during the year will be made quickly available by a complete cross indexing of subjects. One year fifty cents. Three years \$1.00.

American Gladiolus Society.

Rot in Gladioli.

Office of President.

WELLESLEY, MASS., Dec. 26, 1913.
MR. MADISON COOPER,
Calcium, N.Y.

MY DEAR MR. COOPER:

I am very glad that you have decided to publish a monthly magazine which will be devoted to the Gladiolus and to the interests of growers, both professional and amateur. There is certainly room for such a journal, and I am sure it will have the cordial support of all who are interested in this beautiful flower.

After conferring with the members of the Executive Committee and others, I requested the secretary to send to you for publication in the new journal the report of the annual meeting of our society at Minneapolis, instead of issuing a Bulletin to convey this record to the members of the Society as has been our practice, and at the annual meeting of the society in August the Executive Committee will propose that your journal be made the official medium of the Society.

Wishing your enterprise all success, believe me,

Very truly yours,
(Signed) M. CHAMBERLAIN,
President.

Propagating the Gladiolus.

The Gladiolus is readily propagated from seed or division of the corms or bulbs and by the small bulblets or spawn which are found growing between the old bulb and the new one in the fall. Growing from seed is a rather complicated affair and needs special study. With some varieties the old bulb will grow two or more in its place, while other varieties form only one new bulb. For storage the bulblets or cormels should be mixed with half sand and kept from drying out. In the spring they are planted like peas. About 60 per cent of them will grow and produce blooming size bulbs the second or third year.

It is our intention to establish a small ad. department or what might be called a "Growers' Card Department," and the attention of those people who have a few special varieties only for sale is directed thereto. Five lines or about 45 words can be used at a cost of only \$1.00 per month. Growers who are bringing on new varieties of merit will do well to keep their names continually before others who are interested in the same line of work.

"A reader of the *Tribune Farmer* asks me about the rot in Gladioli, saying that the only variety he saves from rot is the Ruffled Glory. The Gladiolus is always more subject to the rot disease in a heavy clay loam than in sandy soil, and some varieties are more subject to it than others. I find that America is one of the most healthy and robust varieties and increases fast, too, while a few other named sorts always rot more or less every year. Eucharis and Triomphe de Cæn I cannot get to thrive at all, and in a mixed lot there will always be some that rot while others right alongside in the rows remain perfectly healthy. Some do not entirely rot, but make small corms and then the tops die off. These I intend to soak in a solution of formaldehyde before planting in the spring and note results."—W. F. MASSEY in *New York Tribune Farmer*.

Gladiolus, Columbine and Petunias.

I wonder how many flower-lovers would like to try my way of growing Gladiolus. I have a long bed with a row of Columbine plants through the center. I set Gladiolus bulbs among these plants, then a row of bedding Petunias on each side. The Gladiolus bulbs are hardy with us, (in W. Va.) so I do not disturb them, but leave them in the ground over winter, or until the clumps are divided, which is once in several years. The long strap-like leaves, add a touch of beauty when the Columbine is in bloom in the spring. Then the Columbine protects the Gladiolus, keeping the roots cool and moist, giving a fine background for the large spikes of bloom. By the time the Gladiolus are done blooming, the Petunias are beginning to bloom, so that the bed is beautiful all summer, the late frosts cutting off its beauty. In early spring it is again ready for duty. Such a bed becomes more beautiful each year with only a liberal supply of fine manure applied in autumn, to be dug into the soil in spring. The Columbine and Gladiolus take care of themselves for years,* and the Petunias self-sow. In fact, so many little Petunias come up in the spring that I get enough plants for several beds.—ORFA ANDRES in *Parks Floral Magazine*.

*Even though the Gladiolus does not freeze during the winter it is of course understood that leaving them in the ground leads to crowding and reduced quantity and small size bloom. [Ed.]

American Gladiolus Society.

The Minneapolis Meeting.

The annual meeting of this Society was held in Minneapolis on Aug. 21, President I. S. Hendrickson presiding.

PRESIDENT HENDRICKSON'S ADDRESS.

Another year has demonstrated the usefulness and increasing popularity of the Gladiolus and also a need for a society such as ours; but as we look over the past year we do not feel satisfied with the work accomplished. While one of the main objects of the Society is to create a demand and love for the Gladiolus, it has always seemed to me that another important work is the testing and proving out of the different varieties that are put on the market; but we feel that very little real good has been done along these lines, largely owing to the unwillingness of many growers to submit their supposedly new and valuable seedlings to the trial grounds before putting them on the market, and I am convinced more and more that something definite ought to be done along these lines if our society is going to accomplish anything at all. It has been my privilege this year to observe many varieties in the trial grounds, and the trials show that there is great anxiety on the part of many growers to put many varieties on the market regardless of whether they contain merit or not, or whether better ones were discarded years ago. I believe if we could induce every grower to register and submit for trial every new variety before putting it on the market, and get an opinion from the committee on nomenclature, it would save a great deal of wasted time. It seems to me that it is to our own interest to be careful along these lines, as nothing hurts business as much as disappointment, and we cannot afford to disappoint a buyer, especially if he is a florist who is depending upon an income from his crop. Each year is proving to the general florist that he must include Gladioli in his growing stock if he would be up-to-date, and he is beginning to find out that they are good income producers, for he is almost sure of his crop, and at the same time they give satisfaction. As far as I can ascertain, the past year has been a good one for most American growers, but a new factor has arisen in the way of unfair competition with imported stock. I believe that we all agree that healthy competition is good for business, but it is needless for me to point out the fact that it is impossible for the

American grower to compete with labor conditions in other countries, and, while I would not want to go on record as doing anything to restrict trade, I do think we should be justified in having a committee appointed to work for an increase of duty to protect our own interest.

Regarding the future of the society, we are having the same experience that all other similar societies have had, and that is, that it is hard work to keep up membership. It is always easy to get members rapidly for a new society, but in two or three years it gets harder and harder, and I am of the opinion that the sooner some plan for affiliation with the S. A. F. and O. H. can be worked out, the better it will be for all concerned. In closing, I wish to thank my associates for the co-operation and response that they have always given me during my term of office.

SECRETARY GAGE'S REPORT.

Secretary L. Merton Gage's report was as follows: There is almost always a critical period in every society's life that affects its future existence. I will not say that we have arrived at that period, but the germ is working, so we must be alert to destroy it before it gets established beyond control. The first indication of this germ's presence is the waning interest of the majority of our members in contributing material for our bulletin. If we do not get this material our bulletin will not continue to be a factor in holding our membership, especially our amateur members. I want to say this much—that the amateurs must do their share in keeping up the interest and standard of the bulletin by contributing to its pages. It is about time that something more than mere pen slinging was done concerning the renaming of varieties and the naming of other growers' seedlings without consent of the originator. At a recent exhibition of Gladioli in Boston, I had the pleasure, or rather displeasure, of seeing two of Groff's varieties exhibited as seedlings, and one of these has already been named by Mr. Groff. If this sort of piracy is allowed to continue, what protection can the American Gladiolus Society hold out to the honest producer of new varieties? *

* * Our membership has increased to the number of twenty-three, but it could easily have been raised to double that number with very little effort on the part of our members. At the International

Flower Show in New York last spring, our Society offered a very attractive prize schedule, but it seems that the time is not yet ripe to bring out a good exhibition of forced Gladioli, for the only exhibitors at New York were John Lewis Childs and Chamberlain & Gage. At the meeting of the society which was held in New York it was voted to adopt the "Repertoire des Couleurs," published by the French Chrysanthemum Society, upon the recommendation of the color chart committee. By direction of the executive committee, the society medals were sent to the Central New York Horticultural Society and the El Paso County Horticultural Society, Colorado Springs, Col. It is my sad duty to report the death of two of our members, who have passed away since our last meeting. Mrs. Montague Chamberlain, who died in Boston on Tuesday evening, Jan. 7, and Frank Banning, whose death occurred at his home in Kinsman, Ohio, on March 17.

COMMITTEES' REPORTS.

Messrs. Kunderd, Stewart and Woodruff were appointed as a committee to report on the president's address. This committee recommended that Mr. Hendrickson's address be accepted.

The finances of the Society were found in a satisfactory condition.

The report of the bulletin committee showed that this department was a most important factor in maintaining interest in the work of the Society.

E. B. George, Walter Mott and J. R. Fotheringham, of the judges' committee, in their report called especial attention to the high standard set in the amateur classes.

Upon recommendation of the executive committee, who met in New York in April, it was voted that the offices of the financial secretary and the corresponding secretary be merged into one, under the name "secretary," and that the by-laws be amended accordingly.

Prof. A. C. Beal, for the nomenclature committee, recommended that names presented for new varieties should be filed for further investigation before being registered. Prof. Beal said that it was impossible to determine the facts concerning many varieties under dispute because of the failure of certain growers to comply with the request of the committee to furnish them bulbs for trial. It was voted that the Society purchase such varieties, for the purpose of comparison and identification in the trial grounds at Ithaca, New York.

Messrs. Cropp and Woodruff were appointed a committee to draft suitable

resolutions on the deaths of Mrs. Montague Chamberlain and Frank Banning.

It was voted to leave the question of the remuneration of the secretary to the executive committee.

It was voted that the nomenclature committee formulate a set of rules to govern it in the matter of registration of new varieties.

A letter from the New York Florists' Club inviting the Society to participate in the 1914 Spring Show in New York was read, and owing to the impossibility of making exhibits of forced stock at that time, the invitation was declined.

Considerable discussion was heard on the subject of a higher protective duty for Gladiolus bulbs, and President Hendrickson urged that active steps be taken to secure this. A committee, consisting of I. S. Hendrickson as chairman, Carl Cropp and Arthur Cowee, was appointed to pursue the matter, and it was the sense of the meeting that bulblets less than five-eighths of an inch in size should be admitted free, and that a duty of \$5 per thousand should be imposed on all bulbs above that size.

OFFICERS ELECTED.

Election of officers resulted as follows: President, Montague Chamberlain, Boston, Mass.; vice-president, Geo. Woodruff, Independence, Iowa; treasurer, Carl Cropp, Chicago, Ill.; secretary, L. Merton Gage, Wellesley, Mass. Executive committee: I. S. Hendrickson, Floral Park, N. Y.; Mrs. A. H. Austin, Wayland, O.; Alex. Henderson, Chicago. Nomenclature committee: Prof. A. C. Beal, Ithaca, N. Y.; I. S. Hendrickson, Floral Park, N. Y.; Leonard Joerg, Flowerfield, N. Y.

Upon motion of Secretary Gage an enthusiastic vote of thanks was tendered to President Hendrickson for his services to the Society.

PRIZE WINNERS.

The following is the schedule of prizes together with the names of contributors and winners in the respective classes.

OPEN CLASS—GLADIOLUS BLOOMS.

C. BETSCHER, Canal Dover, Ohio.

No. 1—\$10.00—For best display of 50 spikes Gladiolus Primulinus Hybrids; stems 18 inches from first bloom; blooms over 4 inches wide; open form. (No entries.)

No. 2—\$5.00—For best new seedling, 3 spikes. Variety must be ready for market within 3 years. Plant must be 4½ ft. high. Blooms 5 inches wide, open form, clear color. (No entries.)

B. HAMMOND TRACY, Wenham, Mass.

No. 3—\$5.00—In gold for best vase of 25 spikes Dawn. Won by Arthur Cowee.

- No. 4—\$5.00—In gold for best vase of 25 spikes Maize. (No entries.)
- No. 5—\$5.00—In gold for best vase 25 Spikes Mrs. James Lancashire. Won by E. E. Stewart.
- H. W. KOERNER, Milwaukee, Wis.
- No. 6—\$10.00—For best vase 25 spikes Early Bird. (No entries.)
- VAUGHAN'S SEED STORE, Chicago and N.Y.
- No. 7—Silver Medal—Best vase Chicago White. Won by H. W. Koerner.
- No. 8—Silver Medal—Best vase Mrs. Francis King. Won by E. E. Stewart.
- No. 9—Silver Medal—Best vase Princeps. Won by H. W. Koerner.
- No. 10—\$10.00—Best vase Vaughan's Rainbow mixture. (No entries.)
- E. E. STEWART, Brooklyn, Mich.
- No. 11—\$5.00—Best vase of 25 spikes Golden Queen. Won by H. W. Koerner.
- No. 12—\$5.00—Best vase of 25 spikes Michigan. (No entries.)
- No. 13—\$5.00 Best vase of 25 spikes Lucille. (No entries.)
- No. 14—\$5.00—Best vase of 25 spikes Purity. (No entries.)
- PETER HENDERSON & Co., New York.
- No. 15—\$10.00 For best 12 varieties not now on the market, 3 spikes each. Won by H. W. Koerner.
- W. ATLEE BURPEE & Co., Philadelphia, Pa.
- No. 16—\$10.00—Best collection 10 varieties, 6 spikes each. Won by H. W. Koerner.
- M. CRAWFORD, Cuyahoga Falls, Ohio.
- No. 17—\$5.00—Best 12 spikes any white variety. Won by Jacob Thoman & Sons with Rochester White.
- A. H. AUSTIN Co., Wayland, Ohio.
- No. 18—\$5.00—Best Yellow seedling never before exhibited. Blooms to be good size and no blotch. 6 spikes. (No entries.)
- JACOB THOMAN & SONS.
- No. 18-A—Best 25 spikes of best white variety. 1st \$10.00, 2nd \$5.00. 1st won by Jacob Thoman & Sons with Rochester White. 2nd won by W. W. Wilmore, Jr., with Reine Blanche.
- AMATEUR CLASS.
- JOHN LEWIS CHILDS, Flowerfield, L. I.
- No. 19—\$5.00—Best display of Niagara. (Did not qualify.)
- No. 20—\$5.00—Best display of Panama. (No entries.)
- No. 21—\$5.00—Best display of Childsi varieties. Won by Grace ReShore.
- ARTHUR COWEE, Berlin, N.Y.
- No. 22—\$25.00—For best vase of 25 spikes of War. (No entries.)
- No. 23—\$16.00—For best vase of 25 spikes of Peace. (No entries.)
- H. W. KOERNER, Milwaukee, Wis.
- No. 24—\$5.00—For best vase of 12 spikes

- Early Bird. (No entries.)
- MISS GRACE RESHORE, Dowagiac, Mich.
- No. 25—\$5.00—For best three ruffled Gladioli, one spike each. Won by Dr. J. H. Jones with three varieties of Kunderds.
- No. 26—\$5.00—For best three spikes, 1 each of America, Niagara, Panama. Won by Dr. J. H. Jones.
- SPECIAL CLASS.
- HENRY F. MICHELL CO., Philadelphia, Pa.
- No. 27—Michell's Silver Medal—For a vase containing six spikes of the best white Gladiolus. Won by Jacob Thoman & Sons with Rochester White.
- No. 28—Michell's Bronze Medal—For a vase containing six spikes of the best yellow Gladiolus. Won by Vaughan's Seed Store with Niagara.
- CHAMBERLAIN & GAGE, So. Natick, Mass.
- No. 29—\$5.00—Second prize, best yellow, 6 spikes. Won by Perkins-King Co. with Niagara.
- No. 30—\$5.00—Second prize, best white, 6 spikes. Won by D. W. C. Ruff with Niagara.
- D. W. C. Ruff, St. Paul was also awarded a special prize of \$10.00 for the excellent exhibit he staged.

Packing Bulbs for Shipment.

Gladiolus bulbs are packed in various ways to meet the different conditions under which they are to be shipped.

If the weather is so cold that there is danger of the bulb freezing, the boxes and barrels should be lined with several layers of paper—old newspapers are useful for this purpose. Dried planer shavings or buckwheat chaff or some similar material should be placed around the bulbs if they are to be carried any considerable distance as they are liable to be bruised if packed loosely. This applies especially to bulbs over $\frac{1}{8}$ inch diameter.

If a number of varieties, in quantity, are to be shipped in one box, the bag containing each variety should be securely wrapped in strong paper to prevent its bursting. Some growers use cloth sacks, which are much safer.

When ordering bulbs from Europe, particularly the more expensive sorts, it is well to request that they be wrapped in paper, each bulb separately, as a safeguard against sprouting and root growth. If large quantities are ordered, direct the shippers to use buckwheat chaff or other dry material, as they sometimes use damp shavings, and then the bulbs arrive in an advanced stage of growth.

L. MERTON GAGE.

The Minneapolis Convention.

Notes by CLARENCE WEDGE in *The Farmer*, St. Paul, Minn.

THE GLADIOLUS PREDOMINATES.

A convention of florists might be supposed to afford an unusual exhibition of cut flowers and we had the feeling that when we attended the National Convention in Minneapolis the 19th of August, we should see all the new chrysanthemums, roses, carnations and every other kind of hot-house flowers. We were, therefore, not a little surprised that the only flower exhibited in any quantity was the gladiolus, and those of the kinds that are grown in the open exclusively. The exhibit of this magnificent flower both in the building and on the grounds was well worth a trip of 100 miles to see, especially as it gave the opportunity of making the acquaintance of the men who are at the very front of the new gladiolus culture. To meet them personally and have them go over the merits of their own particular favorites with the flowers before you, was a rich treat for any one interested in out-door floral culture, which is about the only kind that we indulge in.

NOTES ON VARIETIES.

It is clear from the exhibit of cut flowers inside, and the show of blooming plants outside that the America, the large, robust growing variety, is still far in the lead of all other gladiolus in general popularity. It seems to be a kind that grows well almost wherever set, and fits so well into every social occasion that it is in great demand both as a bulb and as a cut flower. Mr. Kunderd's Glory is a very interesting departure from the common form, something like the Spencer sweet peas among the old fashioned kinds, having a ruffled edge that glorifies the blossom in a way very aptly expressed by the name. Mr. Kunderd has also a number of other varieties of a similar form and varying color. For the first time in my life I saw an absolutely pure white gladiolus. It is very appropriately named White Lady. I was told repeatedly by those who ought to know that the Rochester White is identical with it. Like most of the white varieties it is probably somewhat delicate and not so rapid a multiplier and so is quite likely to remain high priced. I believe that all the other so-called "whites," like Augusta, Chicago White, Peace and many others classed as whites have some color, either a tint in the petals or a blotch in the throat; some of them are only white as they are picked early in the garden and fade out in the

blooms that open up in the house. Peace is a truly remarkable variety in its robust growth and has almost double the size and substance of the leaf of the average gladiolus. Its bloom is very large and has a singularly sweet expression.

FOR OUTDOOR PLANTING.

The beds of gladiolus planted on the grounds about the Armory building where the convention was held were about six feet wide and planted solid to bulbs about six inches apart. This distance, although it may seem rather close, affords a full development for the plant and made one of the richest borders that I have ever seen. The gladiolus seems to stand a much closer planting than most plants affording an equal amount of bloom. At Mr. Fryer's place a few days later I saw some bulbs that had been planted as close as 25 to the foot of row and were still blooming freely and showing a good development of flowers. Of course, rows of this sort should be about six inches wide or there will not be room to give the bulbs a fair opportunity to reach the soil. I think that bulbs could be put out as close together as four inches each way in a large bed and still give very satisfactory bloom, especially if the ground was rich and the situation sunny. The gladiolus does not seem to take kindly to the shade.

J. Harrison Dick, editor *Florists' Exchange*, in the December 13th issue in his "Review of Twenty-five Years' Progress in Floriculture," comments on the advance made in the developing of the Gladiolus, and offers some sensible and practical suggestions with reference to the new primulinus hybrids which have had the attention of some of our growers recently, as follows:

"Gladioli would require much more than a mere paragraph to do them justice. The advance has been tremendous, especially in fine new colors, while the "blues" and "yellows" and "whites" are absolute gains. The latest variations are found in the primulinus race; and it is devoutly to be desired that the growers will confine themselves to improving the colors, leaving the size of the flowers as they are, and also the pretty and distinctive hooded appearance."

Some of the Newer Gladioli.

J. R. LAWRENCE in *Florists' Exchange*.

At the writer's place in Starksboro, Vt., in 1912, more than 1000 sorts representing the cream of the stocks of the old and new world growers, were grown side by side for sake of comparison. With a little more advertising the trade ought to be able to create a tremendous demand for bulbs of this flower. More easily grown than the Sweet Pea or the Rose, it is equally as beautiful and for many purposes in decoration, say for instance where heavy mass effect is desired (either in or out of doors), it is superior to either.

H. H. Groff has done for the Gladiolus what Eckford did for Sweet Peas, and is still doing good work with them. Some of his latest productions are veritable fairy blossoms. The Kelways of England and Pfitzer of Germany are vying closely with him in their efforts to produce varieties superior to the standard article. Kunderd and Goodrich of Indiana help some, for while Kunderdi Glory does not quite meet the description of its raiser, it is a pretty sort and the Kunderdi type should be more popular. Henry Field has a great surprise and treat in store for lovers of Gladioli when he puts on the market his new race of Goodrich Gladioli.

The best white is one sent over by Henry Mette (Germany); it bears the largest and purest white flower. Peace is a beauty but has too much color to be called "the best white sort," as its growers put it.

Gold Measure wins the sweepstakes prize and carries off all blue ribbons and medals in the class of yellows. There is no other yellow that compares with it. It is a Kelwayi.

Pfitzer (Germany) gives us the finest types of lavender, heliotrope, lilac and sky blue, some of his best seedlings rivalling the Orchid in delicacy of shape and color.

Cowee (Berlin, N.Y.), in his new light seedlings, has not only duplicated many of the best of the older sorts but has produced some new varieties worthy of a front cover on some seed catalog and two or three pages of descriptive matter. There is no doubt but that there is a field for some seed firm to work in, in connection with this flower, full page color cuts; true description and special prices would work up a big trade and create a demand for this flower, which all firms would profit by.

In Cowee's light seedlings we found:

1. A new primrose with carmine spots

on lower petals, pale pink suffused on upper petals. Large flower.

2. Large white with only faintest trace of heliotrope markings. Much less color than Peace, and even a prettier flower. Largest flower in over 1000 varieties.

3. Deep America. Body color deeper and crimson on lower petals.

4. A beautiful flesh pink flaked with salmon pink, carmine throat. A few blooms came with throat yellow.

5. Blush pink striped with rose, rose lake blotch on two lower petals.

6. Yellow, deeper than any other. Maroon spot. Faint pink at base upper petals. Buds deep canary yellow.

7. Pure white edged faintly with pale mauve or lavender, yellow spots on lower petals, lavender stripe. Dainty would be a good name for this variety.

8. Flesh, deepening to pink at edge, suffused with apricot. Deep rose spot.

9. White speckled with mauve. Sometimes one, sometimes three petals, bear crimson spots. Buds pale yellow, but open white. Last flower open bears yellow blotch. Rather an odd but beautiful flower.

10. Blush pink, amber spots on lower petals with smaller carmine spots.

11. Pale mauve flushed crimson, crimson spots.

12. Flesh, flaked orange pink. Orange red spots.

Most of the standard sorts and novelties of American introduction are familiar to the trade, but it may be well to describe a few of the best of the Kelwayi type.

Mrs. G. W. Willock throws two types of flowers, one a light pink flaked with carmine on edge, the other a light flesh pink (almost white) flaked with rosy carmine on edges. Really a short striping, varying in depth and intensity of color. The prettiest of all and attracted more attention than any other of the more than one thousand varieties.

Vicountess Iveagh, a glorified Kunderdi Glory, came second in list of favorites; Morris Dancy a close third.

Countess Amy, mauve with white stripe, a striking sort either en masse or single stem. Medium sized flowers.

Vestalin, same type as America, but larger flower with trifle more color—in fact, a better flower.

Duke of Buccleuch, rose pink with white spots. Large, but dainty flower.

Sir H. De Wolf, scarlet with white throat. Large, showy flower.

Cornishman, a big, showy sort, salmon red, violet blotch.

Prince Henry of York is the king of scarlets.

The Pointsman, red, tinted with maroon, yellow lines.

The above are all worthy of importation and of a good place in trade catalogs. Would find a ready sale if properly handled.

With the Gladioli, as with Sweet Peas, there has been some duplication of names, such as, for instance, in the case of Jean Dieula Foy, Christine M. Kelway and Lady Montague. With the writer, these three sorts were practically identical and the bulbs of each sort had been furnished by introducer. Scarsdale and G. L. Jessup is another case of duplication. In so far as it is possible care should be exercised to prevent repetitions of this character.

Early Gladioli in California.

The difference in climate and cultural situation between California and the East is quite clearly illustrated by the following note which appeared in the *Rural Californian* for September. No one would think of planting any variety of gladioli in the East or Middle West, or, in fact, anywhere except in the extreme South or in California until spring. The editor is doing some experimenting along that line, but this is another story and will be told at another time. The item referred to is as follows:

"The small early flowered gladiolus of the Colvillei type may be set out now and will furnish an abundance of their graceful spikes early in spring. There are numerous varieties, but the best to my mind are Blushing Bride, a lovely white with carmine flakes. Peachblossom, rosy red, flaked white, and the Bride, pure white. Although too early to plant the regular large flowered types of gladioli it will not be amiss to insert some good strong corms of the variety America. This particular variety blooms early; the flowers are very large and a magnificent shade of soft pink."

A row of gladioli along the edge of the vegetable garden is a thing of beauty and a joy to the housewife. Plant them near together, about one inch between the bulbs and in a double row four or five inches apart.

Cultural Hints and Varieties Recommended.

E. P. POWELL in *Tribune Farmer*, New York.

Set the bulbs about six inches deep if the soil be light, so that when the heavy stalks expand their flowers they will not bend over to the ground. In clay soil four inches is deep enough. In October the bulbs can be thrown out very easily into a pile, the old bulbs pulled off and thrown away and the new ones stored in a corner of your potato bin. If your cellar is damp they must be stored in some dry place that is frost proof. In Florida I do not have to lift them at all for storage—only once in three or four years to pull off the old bulbs. Forty years ago we were just beginning the evolution of the old grandavensis and ramosus sorts, and every new variety startled us with its beauty; but now we have them by the thousands of varieties and still multiplying. I would select for twenty of the best named sorts America, with spikes two feet long and color a soft lavender; Augusta, a lovely white, with a strong branching spike; Bluejay, the best blue variety; Brenchleyensis, one of the oldest varieties, but still high in rank, scarlet in color and very brilliant; Dawn, a very strong plant, standing four feet high, salmon, shading white; Eldorado, a deep clear yellow, the lower petals spotted with maroon and black; Evolution, a very strong plant, with round flowers, rose colored; Faust, flowers of large size, of a deep velvet crimson; La Luna, pale yellow flowers, nearly white and spotted with brown marking in the throat; Mrs. Beecher, deep rosy crimson and a pure white throat; Scribe, a large flower with a tall spike, carmine red, tinted with white; Shakespeare, pure white, slightly touched with carmine; Peace, pure white, with a bit of lilac on the lower petals; Senator Volland, a pure blue with a dark violet blot; Taconic, a bright pink, the lower petals crimson and shaded with yellow; Mephistopheles, very large flowers and very dark red; Baron Hulot, a dark violet color and very straight spike, well filled; Berlinia, a shell pink shaded darker; George Paul, large crimson flowers, spotted with purple, and Snowbank, large flowers, pure white, but dotted with red

The crowded condition of our columns this month has compelled us to omit the list of members of the American Gladiolus Society which will appear in the February issue.

[Written expressly for *The Modern Gladiolus Grower*.]

Testing New Varieties.

BY G. D. BLACK.

In our test plot the past season we planted 254 lots of Gladioli averaging about 10 bulbs to each lot.

We secured as many of the newer varieties as possible without too great expense from most of the American and some of the European growers. Quite a number of varieties not yet on the market were sent to us to be tested and returned with their increase to the originators.

On account of our extreme drouth during the blooming season, our test was very incomplete, and it will take the testing of at least another season before we will feel justified in saying much in regard to the relative merits of each variety. Even these adverse conditions did not prevent some of these new creations from showing their sterling qualities, and I am convinced that when they are propagated sufficiently, and become better known, they will displace many of the varieties that we now think are very good.

This testing was a source of much satisfaction to us occupying most of our spare time morning, noon and evening during the blooming season.

While watching some of the so-called novelties unfold and show their colors, we recognized old acquaintances, some of which we did not care to meet again and others that are still good friends of ours. We were somewhat disappointed with these surprises, as we had expected to meet some noble strangers of whose fame we had read from the printed page.

One bright morning when Napoleon had removed his mask we beheld the smiling face of our old friend Burrell, which we had propagated and sold for a number of years.

When Wellington uncovered his face we beheld a mix-up with Burrell and "The King."

An entire collection of non-novelties from another dealer, proved to be old varieties which we had received from another source some years ago.

Perhaps Velvet King has more names than any other variety in our list. Some years ago P. O. Coblenz sent us a few bulbs of his No. 312 for testing. Later he wrote us that he had named it Emma. Henry Field has it listed under this name. Still later Vaughans Seed Store introduces it very prominently as Velvet King. Other parties have introduced this same variety as "Grenadier" and also as Wm. Mason.

By which one of these four names shall we designate Coblenz No. 312? This is only one of the many problems that the members of the Nomenclature Committee are asked to solve.

A Pure White Gladiolus.

We have all been wishing for a really good solid white Gladiolus—one that would prove satisfactory under average conditions of cultivation. Many beautiful varieties of this shade have been produced, but as none, so far, have met all the requirements demanded of a good commercial sort, it might be of value to consider what should be the standard for a white gladiolus.

Many of the white varieties that have been put on the market have lacked a vigorous constitution, so perhaps it would be well to ask, have we not been insisting too strongly upon an immaculate white flower, without the slightest tinge of color, even in the anthers. It would seem as if a solid white ground color, with a faint dash of color at the base of the throat and anthers of a deeper tone than pale cream, might prove of more practical value. The plant that produced such a flower would have the blood to yield the needed constitution and prolificacy, and should be as satisfactory as white lilies and other high class flowers of which entire purity of color is not demanded.

A. E. KUNDERD.

Vaughan Buys "Chicago White."

It is reported that A. E. Kunderd, the well known Gladiolus hybridizer of Goshen, Indiana, has sold his complete stock of this recent introduction to Vaughan's Seed Store of Chicago and New York. Mr. Vaughan has been instrumental in pushing "Chicago White" largely and has found it a good variety for florists. "Chicago White" has proved its value for forcing and is early for outdoor planting, and doubtless, fills a valuable place in the list of varieties suitable especially for the florist trade. Whether it will supplant the well known "Augusta" remains to be seen, but there are some who predict that it will.

Beginning with the February issue we will have a department entitled "Wayside Ramblings." This title was given by Mr. C. Betscher to some of his paragraphs written for the new paper, and this suggested to the editor the idea of running such a department each month.

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
PUBLISHED MONTHLY ON THE FIRST OF THE MONTH BY
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Growers are invited to contribute articles or editorials over their own signatures, but the Editor reserves the right to reject anything which in his judgment is not conducive to the general welfare of the business.



EDITORIAL



Greeting.

THE MODERN GLADIOLUS GROWER gives greeting to all lovers of that noble flower to which it is devoted. Heretofore, there has been no regular publication devoted entirely to the Gladiolus except the Bulletin of the American Gladiolus Society and the Hand Book of the National Gladiolus Society of England. That there is a field for such a magazine there is no question. The Gladiolus is at present, generally speaking, unknown. Not one person in five, perhaps not one person in ten is familiar enough with the Gladiolus to call it by name. Everyone knows the Rose, the Peony and the Dahlia, but few people indeed know the Gladiolus. It is perhaps unfair to compare the Gladiolus with others [flowers,] but it is not unfair to state that it is not as well known as its real value warrants. A friend in Minnesota says: "There is no flower that has such a combination of ease of culture, brilliancy of bloom, durability as a cut flower, and long blooming period as the Gladiolus. There is no reason why every family cannot enjoy this flower for the reason that it is as easy of culture as the potato." He is quite right. There is no reason why the Gladiolus should not be grown by everyone who grows flowers of any kind. It is one of the missions of THE MODERN GLADIOLUS GROWER to introduce our favorite flower to thousands of gardens where it has never been grown before.

It is perhaps, better to let actual ful-

fillment take the place of promises for the future, but it is our hope to make THE MODERN GLADIOLUS GROWER a leader in its class and a distinct help to all growers, both amateur and professional. This magazine will not be influenced nor controlled by any particular interests, but its purpose will be to help all who are interested in any way in the Gladiolus. "Special favors to none and a square deal to all" will be our motto.

MADISON COOPER.

How Shall we Interest the Public?

While at the exhibition of the Gladiolus Society of Ohio, in Cleveland last August, and noting the beauty of the display wreath and basket exhibited by Mr. F. W. Griffin, it seemed to us that possibly we growers of the Gladiolus were not doing all that we might to interest the public in our flower and induce people who have never grown it to undertake the pleasurable work.

Usually at the exhibitions there is a long list of prizes offered for Gladioli which seems to be more for a stimulant for the growers than for educating and calling the attention of the people to the possibilities of the Gladiolus as a decorative flower.

Would it not be better if more of the prizes offered were for designs and decorations which might appeal especially to the disinterested public, possibly specify-

ing a particular variety or color for wreath, basket, table, or automobile, etc.

A beautiful variety (Mrs. Watt) was exhibited at the above mentioned show and a visiting florist, with an artist's eye, at once noted its value for design and decorative use in connection with the American Beauty Rose, it being the same beautiful color. In some instances this variety might take the place of the rose, lessening the expense, and filling a place where otherwise flowers would not be used.

Usually Gladiolus growers do not know how to do the design or decorative work, but they might furnish the blooms for capable florists and thus demonstrate some of the many different methods in which Gladioli can be used, thus creating a greater interest and demand for this ever useful flower.

MRS. A. H. AUSTIN.

Matthew Crawford.

A CONGRATULATION AND AN APPRECIATION.

It is not for many of us a possibility to celebrate our Golden Wedding Anniversary, but this was the pleasure given to Mr. and Mrs. Matthew Crawford, of Cuyahoga Falls, Ohio. Their fiftieth anniversary occurred on December 31, 1913, and friends to the number of about two hundred gathered and presented them with gifts and congratulations.

Matthew Crawford may be called the Dean of the Gladiolus Fraternity. He was the first man in America to plant Gladiolus seed in quantity, and has produced many varieties which have become famous. There is no doubt but what Mr. Crawford has grown and developed a larger number of Seedling Gladioli than any other man. He was the pioneer in the work of improving this flower by the introduction of new varieties. At one time he is said to have controlled the entire available supply of European grown Gladiolus seed. While it is perhaps true that before hand-pollenating as a method of scientific breeding had come into use

to any considerable extent, the superior varieties that Mr. Crawford was able to secure from the large number of seedlings grown was not, therefore, as large, yet among those new sorts which do credit to Mr. Crawford's enterprise and industry are such well known varieties as May, which up to the time of the introduction of America was the leading florists' forcing variety. May still maintains a very useful place and has been considered a standard commercial sort for many years. Among others are Margaret, a very beautiful flower; Jessie, a striking velvety red; and New America thought to be an improvement on its parent. Isabel, a comparatively recent pure white introduction will probably bring Mr. Crawford the most honor when it is introduced. Mr. Crawford's work is still going on, and his knowledge of the specialty to which he has devoted his life study is very extensive, and his judgment is deferred to by all who know him.

Mr. Crawford is the author of "The Gladiolus" published about two years ago, which is the only book in existence devoted exclusively to this flower.

We add our congratulations to those of his large circle of friends and wish him and his good wife many more years of fruitful and happy work.

Raising Gladiolus Seedlings.

The article by C. Betscher in our "Queries and Answers Department," in answer to A. S. G., giving details of preparing soil, planting of seed and care of seedlings, is a very thorough one, and should be useful to all growers. Everyone who is a lover of the Gladiolus should raise a few seedlings each year for the varied interest they give in developing. It is certainly an interesting study to watch the opening of new varieties, always with the expectation and possibility of getting something better than anything which has before been produced. A great majority of seedlings are, of course, valueless, but there are al-

ways some which are pretty good, and a very small percentage are fine. By all means grow a few seedlings each year for the pleasure of the work.

It may be suggested, however, that the growing of seedlings is a rather uncertain job, especially during a very wet or a very dry year, and the soil conditions must also be right for best results. It will be noted in this connection that Mr. Betscher recommends some very thorough and rather laborious preparation of the seed bed.

MADISON COOPER.

The Gladiolus in Design and Decorative Work.

Mrs. Austin's suggestion on page 12 is too valuable to be passed over lightly. Not only have the managers of exhibitions been at fault in not offering more prizes for decorative effect, but the exhibitors have been indifferent about the display of their flowers, resting content generally with putting them in vases in monotonous array.

The one notable divergence from this monotony has been the display of B. Hammond Tracy which has been especially noticeable at many eastern flower shows for its artistic arrangement. In these displays Mrs. Tracy has shown growers the possibilities of the Gladiolus, and taught enthusiastic flower lovers how they could add to their home decorations.

It is to be hoped that during the coming exhibition we shall see many followers of Mrs. Tracy's splendid example.

M. CHAMBERLAIN.

Quite a number of the prizes in the various Gladiolus classes at the Minneapolis show, as reported elsewhere in this issue, were not competed for. Minneapolis is rather too far west to be easily reached by the majority of growers. Considering this fact the Gladiolus show as staged was certainly a very great success and has been favorably commented on by many people. The extremely warm weather for several days preceding the show injured many of the blooms in

transit, especially those from long distances. Had it not been for these two reasons there would have been a much fuller exhibition and greater competition for the prizes offered by the Society.

We recommend for the consideration of our readers the suggestions offered by Clarence Wedge in his notes on the Minneapolis Convention. He suggests that bulbs may be planted as close together as four inches each way in a large bed and give satisfactory bloom. There is no question about this and Gladioli may be planted in a wide row six inches wide and the bulbs only one inch apart in the rows. This will bring them so as to average at least 25 to the foot of row. With the rows 20 inches apart no damage from crowding or shade will result.

Help us to Improve.

"No good Book, or good thing of any sort, shows its best face at first."—*Carlisle*.

While this first issue of The Modern Gladiolus Grower is in many ways extra good, yet we are quite aware that there are imperfections, and these we hope to remedy in due time. It takes time to get a new publication organized and running, and we expect to eliminate the imperfections as rapidly as possible. Our friends can help us by offering suggestions. Useful articles and notes which contain facts and information are especially helpful.

It will be noted that we do not exercise the editorial prerogative and reserve our editorial columns for expressions by the editor. Every Gladiolus grower is an editor of THE MODERN GLADIOLUS GROWER if he has advice, opinions, suggestions or comments which will help others, and if he will put them on paper in proper form or send them to the editor so he can do so.

At our Gladiolus shows we need judges who are Gladiolus specialists and not those who cover the entire floral field. It is suggested that the professional classes might be judged by amateurs, and the amateur classes by professionals.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]-EDITOR.

Growing of Gladioli From Seed.

TO THE EDITOR:—

Will you kindly give directions for planting and care of seed beds for getting new varieties of Gladioli? Being a new beginner would appreciate quite complete instructions including the preparation of seed.

A. S. G.

Answer:—

PREPARATION OF SOIL.

Presuming that one has good soil to begin with the next step is the right handling of it. Where possible to do so, it is very good to have the plot planted to clover—Alsike planted about July 15th or rye later on—and given a good mulching of manure, but not heavy enough to ruin it. This will feed the clover and leave the ground in extra fine shape. When severe freezing sets in about November 15th, or later in an open winter, spade the plot about eight inches deep, turn so top soil and clover is at bottom, leaving rough so that freezing will penetrate deeply. About January when an open spell comes as soon as it gets colder and the top is frozen two or three inches deep, dig this plot up with mattock or pick about three to four inches deep so that it will freeze deeply, leave as rough as possible. We do this a number of times during the winter but not after severe freezing is at an end. This neutralizes the elements; sterilizes the soil; stratifies weed seeds; &c. When a severe change to colder, about March 15th or later rake it level, and even if a bit wet the freezing will leave it very fine. This will bring out early weeds so that when soil is ready to plant about April 15th or later it may be hoed and raked thoroughly. It will be in fine shape to plant any time after April 15th in Central Ohio.

PLANTING OF SEED.

Granting that the soil is in very fine condition—perfectly level—we now begin to plant. Very often ground is not what it should be, and seedlings do not turn out well. For this reason we plant several rows of large bulbs along-side and if soil is wrong the large bulbs also will show it.

Our beds are about forty feet long. We

take several eight inch boards to walk on. Then take a wide flat shovel and scoop out the soil about three-quarters to one inch deep. Make perfectly level with back of rake. Make beds from four inches to twenty-four inches wide. Plant seed quite thick so ground is covered; then scoop soil and cover seed carefully. We level carefully before moving boards ahead so rain does not form puddles on the beds. In this way we plant thirty-five to fifty pounds of seed.

PROTECTION OF BEDS.

These beds may be covered with old carpets, old sacks or burlaps, and left on until plants are two inches high. Mats or straw may be used.

WATERING.

Until seed is pretty well up it should be kept damp say for four or five weeks after planting. Water evenly and thoroughly.

Whenever the beds partially dry out we give them a thorough watering. *Never let the seedling bed get dry.*

We prefer watering very early in the morning, but in hot dry weather about sundown. When done thoroughly it may be done anytime during the day.

FEEDING.

Planted so thickly it soon requires feeding. We have a heap of well rotted manure to which has been added bone flour, wood ashes, soot and lime mixed one part to which we add two parts good soil—mix thoroughly—sieve through fine sieve and put evenly through the plants about June 20th and July 15th. This must be done with care. We water as fast as we get several beds mulched so ammonia, etc., does not escape. Do not put on too thickly.

WEEDING.

Go over the plants often. Do not let weeds get a start; once a week is best.

DIGGING.

When planted April 15th to April 30th, they will be ripe enough to dig August 15th. Earliest types August 1st—latest types about August 30th.

Do not sieve or rub much. We loosen the soil with a stiff trowel then pull the plants out, sieving the balance lightly,

although it is better to pick out all that do not pull out.

CURING.

Put in shallow boxes about two inches deep, then put in a dry cool shed or cellar. Do not leave where winds or drying occurs as often they harden easily, especially so when bruised in sieving. Rub roots off lightly when ready to plant.

As soon as dried nicely put in shallow boxes and store in cellar. Cover with burlaps or paper to prevent drying.

Do not keep near fire heat as they deteriorate greatly.

PLANTING SEEDLINGS.

Plant about April 10th to May 15th three inches below soil level. Draw the rake through them when coming up. Do this every week or after every rain until plants are about eight inches high. Keep soil loose about them until August. Many perish if ground becomes crusty.

C. BETSCHER.

Branching Habit Gladioli.

TO THE EDITOR:—

Some discussion has taken place about Gladioli of branching habit, from which I suppose is meant the throwing of two or more spikes. Please advise if this may be considered a desirable characteristic or otherwise, and how is it regarded among the trade? I have a very promising seedling in which this habit is most pronounced and wonder whether it is a merit or otherwise.

F. M. W.

Answer:—If the plant is a tall, strong grower, I consider the branching habit of much importance, not only to the florist using spikes and the individual flowers, but also to the amateur who wishes his bed of Gladioli especially en-masse, to produce bloom as long as possible. With branching varieties as soon as the main spike has finished blooming, this can be cut and the branches allowed to bloom freely. I have some varieties the branches of which produce longer and better spikes and larger flowers than many standard varieties which produce only one spike of flowers. With a weak or dwarf variety, I would not consider the branching habit an advantage.

ARTHUR COWEE.

American Gladiolus Society Annual Meeting.

TO THE EDITOR:—

Please give date of the next annual meeting and show of the American Gladiolus Society? Are amateur members eligible for membership, and what is the expense?

C. G. R. T.

Answer:—The next annual meeting and exhibition of the American Gladiolus Society will be held in Boston in connection with the Society of American Florists and Ornamental Horticulturists, August

18th, 19th, 20th, 21st, 1914. The initiation fee and dues for first year are \$3.00, and thereafter \$2.00 a year. All flower lovers are eligible for active membership provided they have duly applied for membership and their dues have been paid in advance for one year.

An excellent schedule of prizes is offered at our annual shows for both amateur and professional growers, and reports of these meetings are sent to all of the members. Bulletins have been issued by the Society from time to time containing these reports, together with other interesting matter pertaining to the culture of the Gladiolus, and now that Mr. Cooper has arranged to publish THE MODERN GLADIOLUS GROWER, we hope that this journal will take the place of the bulletin permanently to the great advantage of all concerned, especially so inasmuch as THE MODERN GLADIOLUS GROWER is to be issued every month; and this should be the means of inducing many more to join our Society. Let me send you an application blank at once.

L. MERTON GAGE,

Sec'y Am. Gladiolus Society,
Wellesley, Mass.

I. S. Hendrickson's article entitled "The Gay Gladiolus" gives in condensed form a brief review of the history of the Gladiolus during recent years. He gives some hints about varieties which amateur growers may well take notice of. While there is ample room to differ with Mr. Hendrickson's way of pronouncing the word, yet we must all agree that the old way is the easiest.

Amateur growers are especially urged to use the Queries and Answers Department. Questions of general interest will be answered by those who know how. Professional growers can likewise find a solution of many of their difficult problems. If you can offer suggestions in connection with anything which appears in this department, do not hesitate to do so.—Editor.

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GLADIOLUS—"MRS. FRANCIS KING."

(See also illustration of single flower spike on page 22.)

One of the greatest successes among the comparatively recent introductions. Originated by P. O. Coblenz, New Madison, Ohio, and introduced through Vaughan's Seed Stores, Chicago and New York. This is one of the most attractive and loveliest of Gladioli, and could we grow but a few varieties "Mrs. Francis King" would be one of them.

It is described by some as a flame color, by others as a deep salmon pink, and there is a blotch of darker shade in the throat. Its habit of growth is rather slender, growing very tall and with a graceful willowy habit. The spikes sometimes attain a height of five to six feet. The flowers are large and wide open, from five to eight in full bloom at a time. Under artificial light it is particularly brilliant and effective. Each bulb produces a main stem with two branches. It is a splendid cut flower and a good keeper, and is useful for forcing.

In the Garden.*

BY CAROLYN A. DONALDSON.

When Phyllis in the garden walks,
She seems the fairest flower there;
Her cheeks are like the hollyhocks
That sway to kiss her brow and hair,
With boldness that my spirit mocks;
They seem to say: "You do not dare."

When Phyllis stoops to cut the stalks
Of her Gladioli so gay,
To each, as to a friend she talks,
And greets them in her merry way;
With Gertrude and Augusta walks,
As fresh and pink and white as they.

How Phyllis loves the glowing frocks,
Worn by that witching flower-dame
Gay Mrs. Francis King, whose smocks
Of mingled sun and fire-side-flame
Rival the near by hollyhocks,—
And fairly beat them at their game.

When Phyllis at the portal knocks
Of that dark beauty, Helen Knight,
Whose glowing, vivid color, mocks
The pulsing of my heart's delight,—
I fain would bloom 'mid garden walks,
To bring such joy to Phyllis' sight.

When Phyllis gains the liled stalks
Of rare "Niagaras," their cream
O'er flows; each petaled pitcher streams
To pour for her its nectared stream
Of glory, when my Phyllis walks
Among them, while I watch and dream.

When Phyllis in her garden walks,
The ardent Jessie's blushes flame;
The Amethysts in purple frocks,
Gold Nuggets, yellow as their name,
And proud America's pink stalks,
She hails in turn with glad acclaim.

When Phyllis in her garden walks,
The fairest flower among the fair,
Her cheeks outbloom the hollyhocks,—
The Klondyke's gold is in her hair;
When lo! Love's bloom my heart unlocks,
And Phyllis smiles upon it there.

*Dedicated to Mr. and Mrs. Matthew Crawford,
Cuyahoga Falls, Ohio.

Forcing Gladioli for Florists.

[Written expressly for *The Modern Gladiolus Grower*.]

Florists may use to advantage some of the early flowering or forcing varieties of Gladioli in situations where late chrysanthemums have been removed. The Gladiolus will prove a profitable and easy crop to grow. The composite employed for the chrysanthemums is ordinarily sufficiently rich in fertility, but some bone meal may be added and thoroughly stirred in.

The well known forcing varieties of "Colvillei" the "Bride," "Blushing Bride," and "Peach Blossom" may be used, and in addition "Augusta," "May," "America," "Mrs. Francis King" and "Brenchleyensis" are especially good. Many of the newer varieties are valuable including "Chicago White," but most of them are so expensive that they are not valuable for florists' use. Bulbs planted in January may be had in flower during April to May, but for the Decoration Day trade planting should be done about February 1st to 15th.

A high temperature is unnecessary and undesirable for Gladioli, and a night temperature of 50° or even somewhat lower is sufficient. Bright sunshine as soon as the flower is up brings on the bloom quickly, and as the days get longer toward February and March sufficient sun may ordinarily be had.

Gladioli bulbs may be planted in rows a foot or so apart, and the space between used for a month or two for small pot plants. Some florists plant Gladioli between rows of carnations, but this may not be good practice unless space is especially valuable. If no bench room is available use six inch pots planting about three large or four or five small bulbs to the pot.

European vs. American Bulbs.

Owing to the drouthy conditions prevailing in the Gladiolus growing sections of America, a very large percentage of the crop of 1913 is small or second size, and first size bulbs measuring 1½ inches up will be in short supply and difficult to secure. The Holland grown bulbs are full size and are being delivered in the United States at very low prices. The value of the foreign grown bulbs for forcing, however, has been questioned, and the percentage of loss is said to be very high. One expert American grower states that he would rather pay \$15 for American grown stock than \$9 for the Holland grown, and for the reason that the home grown bulbs have much greater vitality and give a stronger flower spike. Many people, however, buy strictly on measurement and prices, and not enough on quality, and buy the lowest priced bulbs which are offered.

The variety "Mrs. Francis King" as a cut flower is reported to have sold better than any other variety to seashore dwellers along the Atlantic Coast during the past summer, and that bunches of a dozen spikes have brought as high as \$1.50.

The American Gladiolus Society.

Trial Ground Work.

BY ALFRED C. HOTTES.

FOR three years, as most members will know, the New York State College of Agriculture of Cornell University has conducted the trials for straightening out nomenclature, trying the comparative value of seedlings, and maintaining a collection of the better varieties for comparison. The work has been under the supervision of Professor A. C. Beal. In 1911 Mr. George J. Burt, and in 1912 and 1913 the writer has had charge of receiving, planting and describing the lots sent in for trial. Gladiolus growers will realize that Mr. Burt got nicely started when he was called to other fields of work.

This year about 600 varieties and unnamed seedlings have been tested. At Ithaca during the summer a severe drought occurred so that though the varieties were somewhat dwarfed, being upon a clay loam they suffered but little. Many of the later blooming varieties did not flower having been killed by two early frosts, Sept. 14 and 15, earlier than for many years in this district. The varieties of 1911 and 1912 were planted and the previous year's notes were confirmed. A slight change has been made in the score card. Photographs were taken of about 100 varieties.

During the summer about 225 letters were sent to the leading Gladiolus growers of United States, Canada, England, Russia, Germany, France, Holland and South Africa. Many replies have been received but it is hoped that those who have not yet answered will do so in the near future. It is necessary for those connected with the trial ground work to know the most modern and up-to-date practices in regard to Gladiolus culture, as well as the opinions of the growers in regard to ideals, and characters essential for good varieties. The writer has had considerable difficulty reconciling the various opinions of growers to one set ideal in color, type and growth. All varieties have been described impartially. Few synonyms were found, this may be due to a lack of so large a number of synonymous varieties as was first anticipated but more largely is this due to the unwillingness of growers to send doubtful varieties for test and know the truth.

The trial grounds will issue no report upon varieties until such a report is authentic. We gladly report progress and

behavior of a grower's seedlings or varieties but with a limited number of corms of a variety for a short time perfections and defects are not so noticeable.

We thank those who have sent us corms for trial and assure them that even though no report is received, their varieties are planted carefully and described. We wish to thank those who sent us cut spikes so frequently this summer and encourage others to do the same.

In the lists appended it is not meant to present the *only* good ones in each class but only such as in our trials seemed in their way especially commendable. We welcome criticism of the results and are glad to know of errors that they may be properly righted.

LARGE BLOOM.

Euler,	Princes,
Scarsdale,	General Kuroki,
Rosella,	Eugene Sandow,
Mrs. F. Pendleton, Jr.	America and Maple-
Desdemone,	shade,
Minnehaha,	Grahame White,
Monster,	Seedling No. 385 Um-
Parliament,	pleby,
Peace,	Countess of Leicester,
Seedling Nos. 25, 52, 58, 57, Mrs. Austin.	

GOOD SUBSTANCE.

Mrs. Francis King,	Seedling No. 11, Hoeg,
General Kuroki,	Mrs. Frank Pendle-
Nancy Ray,	ton, Jr.,
Littleton,	Glory, (Kunderd),
Beacon Fire,	Ivory,
Daisy Rand,	Golden King,
Lady Young,	1900,
Dictum,	Ruffled Big Face,
Parure,	Ruffled Yellow,
Helen Tracy,	La Luna,
Decoration,	Desdemone,
Primulinus Hybr. x $\frac{1}{2}$	Ruffled (Kunderd.)

GOOD LANDSCAPE.

Scarsdale,	Wanda,
Nancy Ray,	003 Coblenz,
Grace Henry,	58 Mrs. Austin,
Queen Esther,	Brenchleyensis,
Golden Queen,	Lemon Drop,
Elector,	Yellowstone,
Chieftain,	Michigan,
Idella,	Wm. Mason,
Nellie,	Halley,
Renown,	Premiere,

Taconic,	Delicatissima,
Hostes,	Beacon Fire,
Lady Young,	Harwinton,
Candidum,	Harvard-Teas,
Ray,	President Taft,
Bertha Comstock,	September,
No. 400 Coblentz,	Stewart No. 74.

FLOWERS WELL ARRANGED.

General Kuroki,	Gallieni,
Nancy Ray,	Glory,
Umpleby Seedling	Ruffled Salmon,
No. 5,	Ruffled x Primulinus,
Pink Beauty,	Bride of Goshen,
Eugene Sandow,	Mrs. Francis King,
Grace Henry,	Scarlet Letter,
Duke of Buccleuch,	La Luna,
J. L. Childs,	Delicatissima,
Maize,	Grahame White,
Klondike,	Queen Esther,
Red Lion,	Wm. Mason,
Mrs. Watt,	Desdemone,
Yellowstone,	Farmington,
Halley,	Orient,
Europa,	Renown,
Spring Song,	President Taft,
Lady Howard de	Hazel Harvey,
Walden,	Peace,
Safrano,	Decoration,
Ruffled Yellow,	Lemon Drop,
Ruffled Big Face,	Premiere,
Parure,	Crackerjack,
Panama,	Rochester White,
America,	Hoeg, No. 76,
Mapleshade,	Mrs. G. W. Moulton,
Sir Thos. Dewar,	Mrs. W. L. Thomp-
Hostes,	son.
Snowbank,	

DAINTY AND CLEAR COLORS.

Mrs. Francis King,	Alaska,
Duke of Buccleuch,	Peace,
Viper, deep red,	Attraction,
Alice Carey and	Candidum,]
Snowbank,	Frau Gabriel Char-
Mrs. Frank Pendle-	ton,
ton, Jr.,	Europa,
Reine d'Anjou,	Fraulein,
Early Pink,	H. G., (Auten),
Parliament,	Elizabeth Kurz,
Lady Young,	La Luna,
Panama,	Scarlet Letter,
White Lady,	Belle Mauve,
Rochester White	Melrose,
Decoration,	Hoeg No. 14, (an ex-
Harwinton,	ceedingly clear
Chalice,	pink),
Oberammergau,	Parure,
Morning Star,	Primulinus, ($\frac{1}{2}$ ruf-
Safrano,	fled),
Kunderd's Glory,	Ruffled Yellow,
Austin No. 58,	Lord Alverston,
The Gem,	Niagara,
America,	September.



GLADIOLUS—"KUNDERDI GLORY."

This is the first of the ruffled sorts produced by A. E. Kunderd of Goshen, Ind. The type is distinctly new and is an original American production, and has created much interest, especially among the European Gladiolus trade. The plant has health and vigor in exceptional abundance. The massive spikes attain a height of 4 to 5 feet, and bear from 12 to 20 blooms. In opening the buds are a soft creamy pink, but as the blooms open the color changes to an ivory white suffused with pale lavender, which is deeper toward the edges. The lower petals are of a light buff tint with a pale crimson stripe through the center, the throat being penciled with buff and crimson. The flowers are of exceptional substance and durability. The distinguishing feature of this flower is the peculiar ruffling or fluting of the petals, resulting in the glorified effect which has given it its name.

Some Observations on the Gladiolus.*

By G. D. BLACK.

GLADIOLUS bulbs are produced in three ways. If the seeds which form in the pods on the spikes are planted, each seed will produce a new variety, each different in some degree from any other. Nearly all of them will be inferior to the parent.

The small bulblets will produce bulbs of the same variety as the bulb from which they grew, and will sometimes bloom the first year, but most of them will not bloom until the second and third year.

The third mode of increase is when the old bulb grows two or more spikes and a new bulb forms at the base of each spike. A friend of mine calls the bulblets chickens because they cluster around the bulb like chickens around the mother hen. The Gladiolus is like our domestic fowl in other respects than this, because the same laws of life and nature apply to both the animal and vegetable kingdoms. A Gladiolus bulb will reproduce itself and produce bulblets freely for a few years, but the production of bulblets and the vigor of the old bulb gradually diminish, same as the production of eggs by the old hen. The bulb may bloom and the hen may show her gaudy feathers for some years longer, but they are both nearing the end of life's journey. The florist or seedsman who sells you these old bulbs that have lost their usefulness, because they can be bought cheaply, should be condemned just as much as the marketman who gives you an old fowl when you order a spring chicken.

A florist to whom I remonstrated for sending me old bulbs, replied that they rejuvenated all their old bulbs before sending them out, but he did not divulge the secret process.

There are those who assert and believe that Gladioli will change color from one year to the next. They think they have good proof of this because a few years ago they bought a mixture containing various colors, and now some of the varieties, especially the light shades are missing. The explanation is simple. As the bulbs become weakened with age, they fail to grow and decay in the ground so that they are not noticed at digging time, or when they do make a weakly growth they fail to bloom. Most light shades are constitutionally weak. The

red shades are usually more vigorous and live longer.

Color is not the only difference in varieties, as some seem to think. The earliest will bloom a month or six weeks before the latest. Some will produce bulbs four inches in diameter, and other varieties bulbs that are seldom more than one inch in size. Varieties vary in height of growth, from eighteen inches to five feet or more.

A great advance is being made in the development of new varieties. The improvement is so marked that many fail to recognize the flowers. "What is the name of these flowers?" is the question that was so frequently asked, that we were obliged to have large cards printed and placed conspicuously with our exhibit at the State Fair to impart this information.

It is interesting to hear the many exclamations of delight; the various comments, and the several different pronunciations of the word Gladiolus as the sight-seeing throngs pass by.

The Gladiolus is the most satisfactory bloomer we have when used as a cut flower. If cut when the first blossom on the spike is open it will with proper care continue to bloom until the last bud is open, lasting from one to two weeks, depending on the length of the spike and the temperature of the room. Each morning when the wilted blooms are removed, about one inch should be cut from the base of the stem to prevent decay. Market gardeners are beginning to realize that the cut spikes of bloom are very attractive as decorations for their wagons and stalls, as well as a prolific source of revenue. Although the best adapted for blooming in the vase, the Gladiolus is fine for bedding purposes when properly planted and cared for, as all who saw the plantings on the Armory grounds at Minneapolis during the American Florists' Convention will attest.

If I could have only one or two varieties of each color from those which are now sold at a reasonable price, I would select Velvet King or Independence for red, America for light pink, Augusta or Peace for white, Baron Hulot for blue, and Golden King for yellow. There are so many colors and combinations of colors and shades, that it is hard to make selections, especially when we take into consideration the many other characteristics of each variety.

* Paper read before the Minn. State Hort. Society, Minneapolis, Minn., 1913.

Gladioli will do well on any soil that will produce a good crop of corn or potatoes. A sandy loam is best, and heavy clay the poorest. I have had good success on heavy soil by covering the bulbs lightly with sand before leveling up the ground. Care should be taken that no fresh manure comes in contact with the bulbs. They may be planted any time in the spring when the soil is in good condition. Large bulbs may be planted as late as the first of July, and most of them will bloom before frost. Large bulbs should be planted six inches deep and the smaller ones in proportion to their size up to two inches deep for the smaller size and bulblets. Gladiolus bulbs are usually planted too shallow. The new bulbs are always formed above the old ones we plant. If planted in solid beds the bulbs should be placed six or eight inches apart each way. In our fields where we use a horse for cultivating, we make our rows thirty inches apart and leave one inch of space between the bulbs. Bulbs one inch or more in size should be placed right side up, and smaller sizes may be placed in any position.

Cultivation should be continued once a week until after the blooming season, and also as soon after each rain as the soil will permit. This destroys the weeds when the seeds are germinating and creates a dust mulch to conserve the moisture.

If the spike is cut without removing much foliage when the first flower opens, the bulb will be larger and better for next season's blooming. They should be dug in the fall after the tops ripen or are killed by freezing. The tops are cut or broken off just above the bulb, and the bulbs put three or four inches deep in crates to cure. A small quantity may be stored in a market basket and placed on a shelf or hung from a joist in the cellar. They must be kept dry and where they will not freeze.

The Gladiolus Society of Ohio.

[Special Correspondence Modern Gladiolus Grower.]

Secy's Office, WARREN, O., 1-17-'14.

The first name to be recorded upon the mortuary list of the Gladiolus Society of Ohio, is that of Mr. Allison W. Hunt, of this place, whose death occurred on the 15th of this month. Those who knew him best will most deeply feel their loss in his departure. Mr. Hunt was the last member of one of the old families of this city, a refined, courteous, kindly-spirited gentleman, in every way worthy of the

esteem of his friends. His love for flowers was a life-long passion, and was carried out in a purely amateur way, yet with a deep and thorough understanding of the truths and principles of the art equalled by few who consider themselves professionals. For some years the Gladiolus had been his specialty, and in this he was taking a high rank. He was engaged in Hybridizing and the growing of cross-bred seedlings, and had his life been spared there is no doubt that some of his work would have gained a place in the world. He was unmarried, and the only remaining relatives, so far as I know, are a nephew, Louis C. Brown, postmaster of this city, and his family. Not only in the circle of those most intimate, but by all who knew him, his departure will be felt as the loss of a personal friend.

WILBUR A. CHRISTY, Sec. & Treas.



"MRS. FRANCIS KING."

A single, shortened spike showing form and arrangement of flowers. For description see front cover page.

It is reported that 25 bulbs of the Gladiolus "Prince of Wales" together with the bulblets belonging thereto, were sold for approximately \$400. This seems to be a pretty good price for a small number of bulbs with their increase.

Mrs. Austin's Gladiolus Talks for Amateurs.

NO. 1.—SELECTION.

They have come, and are spread out before us, and never have we had a finer lot of floral catalogues. A glance shows us both plain covers and those with dainty truthful illustrations, none of the old-time gaudy monstrosities. Some of these catalogues came last month and we looked them through hurriedly, but now it is high time to begin our plans for the summer flower garden.

As the Gladiolus is our favorite flower we turn to its descriptions for we must have many of these. If it is necessary for us to be a little careful in our expenditure there is nothing else in flowers so adaptable to all conditions, and that will give so much pleasure and satisfaction for so little money.

There are light mixtures and dark mixtures and mixtures of both light and dark, and at such low prices.

That beautiful lavender pink, America, equally suitable for the "brides bouquet" or cemetery vase, can now be had at a price within the reach of all, and we should not fail to plant this variety in large quantities. There are the Kings: Golden King, Velvet King (alias Grenadier, Wm. Mason and Emma) Mrs. Francis King, the latter two are showy reds. Peace, white, and beautiful as its name; dear old Augusta; Baron Hulot in royal purple robes; dainty Dawn; Mephistopheles ("what's in a name"), and many others, not forgetting Primulinus with its modest golden bells.

If money is no bar we will revel in the new and high priced seedlings, wonders of the hybridizers' art:—Panama, Schwaben, Niagara, Myrtle, Glory of Noordwijk, Rochester White, Yellow Ruffled, Michigan, Mrs. Frank Pendleton, Jr. We'll have a few of the last anyway for it is a wonder in the garden and, well—there is no end to desirable new varieties.

The modern gladiolus is so suitable for all occasions:

The porch must breathe its word of floral welcome.

Miss ten-year-old is to have a birthday party.

There is the lawn fête where we must use those varieties so beautiful in artificial light.

Perhaps, in a whisper, there will be a summer wedding.

The ever increasing popularity of the decorated auto, and the "auto bouquet", and right here let us remember that no other flower will stand the cutting of the

air by the enthusiastic chauffeur, better than our favorite.

So let us make our selections now, a long list, and send for them early.

MRS. A. H. AUSTIN.

Gladiolus Colvillei.

[From the American Florist.]

The winter blooming Gladioli make a valuable addition to the late winter and spring flowers and are very useful as a cut flower or in all kinds of floral work. The blooms are much smaller than the Gladiolus Gandavensis and kindred kinds and can be artistically employed. The varieties grown are The Bride, white; Blushing Bride, white, tinged with pink, and Peach Blossom, light pink. The culture of these is very easy and by a succession of plantings the flowers may be had all through early spring up to June. The bulbs can be procured all at once and kept dry and cool, but do not leave them standing around in the room over the boilers or they will rapidly lose their vitality. They can be planted in deep flats and placed in an out-of-the-way place until they begin to grow, when they should be given a light location in a house with a temperature similar to that in which carnations are grown. The flowers will be larger and have more substance if grown cool, but it will take considerably longer to get them into bloom. Some growers plant these bulbs between the rows of the carnations or the violets, but our experience has been that it is far better to grow them in boxes by themselves, for the carnations will need all the nourishment in the soil if growing well, and if not, they as well as the violets when through blooming had better be cleaned out and some other crop planted and not have a crop mixed in which would delay the planting or occupying of the space. These Gladioli will be found very useful and well appreciated by the best trade.

"Glad or Gla-di."

TO THE EDITOR:—

The question of pronunciation will never be settled of course as long as there are people to take both sides, as the dictionary always follows the crowd in such matters. But if there could be some way devised to take a census of the matter and find out which is the most popular among *Gladiolus* growers it would be interesting. Count me with Mr. Hendrickson.

FRANK S. MORTON.

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Growers are invited to contribute articles or editorials over their own signatures, but the Editor reserves the right to reject anything which in his judgment is not conducive to the general welfare of the business.

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EDITORIAL



Cut Flowers vs. Bulbs.

"Wouldst thou both eat thy cake and have it?"—Herbert.

The common interpretation of the above quotation is, that you cannot eat your biscuit and still have it left. This applies to the Gladiolus as well as to many other things. It is impossible to grow the very best exhibition bloom from bulbs which have during the previous season produced a full spike of flowers.

In our "Queries and Answers Department," it will be noted that A. H. Austin Co. in answer to C. R. about cutting flower spikes calls attention to the fact that the best bloom is secured from a bulb which has made a rapid growth two years from bulblet and from which the spike has been pinched out as soon as it appeared. This gives a thick, strong bulb, which, if properly fed and with a suitable amount of water at blooming time, will give the real exhibition bloom so much desired. Do not forget, therefore, that if you get fine bloom this year that from the same bulb next year very little can be expected. It is from the younger bulbs that the best results always may be had. Bulbs "wear out," as the expression is, from the fact that they are overworked, as the bulb gives the flower spike to its own loss. The foliage feeds the bulb, and it may be easily understood that if the flower spike is fully developed and more or less

foliage cut with it, that necessarily the resulting bulb, even though of large size, will naturally be lacking in strength and the power to develop and mature a full size flower spike for another year.

MADISON COOPER.

"Starved or Fed."

We quote the above from the last three words of I. S. Hendrickson's answer to C. Y. K. in our "Queries and Answers Department." A long article could be written with this as a text, but we will content ourselves by stating that if good results in the growing of any sort of vegetation is expected, the crop grown must be well and properly fed. The Gladiolus or any other crop grown on poor land will make a poor showing unless the season is an unusually favorable one. Each grower should study his soil and its requirements and act accordingly. The Gladiolus does best on a sandy soil, and, therefore, it is important to keep up the supply of humus by proper rotation of a green manure or cover crop or by supplying stable manure. Nothing definite can be said about chemical elements required, as each soil must be studied separately, but lime should be used rather freely where heavy applications of stable manure are made or where green manure crops are plowed under, to prevent possible excessive acidity and fungoid or scab

diseases. By all means feed your crops and feed them intelligently, and do not expect a good crop of bulbs or a superior growth of bloom on a lean or worn-out land.

MADISON COOPER.

A Plea for Better Printing.

I notice that many members of the American Gladiolus Society do not realize the importance of using good and attractive stationery, and some do not have so much as a business card. This is certainly a false economy.

When I meet a man I have several things to assist me in reading his character and enable me to judge as to his reliability and business qualifications: clothes, voice, features, manner, all combine to give one an impression, but when I receive a letter from an unknown correspondent I have only three sources on which to base an opinion, the handwriting, the message and the paper on which it is written, and if the business heading is poorly printed on cheap, muddy paper the mental picture one makes of the writer is seldom a pleasant one.

A large grower and advertiser says of our membership: "Judging from the appearance of the letters I receive, many of them are a pretty poor sort." A well known financier says: "If I were about to engage in a mail order enterprise I would use the finest stationery money could buy."

The man who has not sufficient enthusiasm for his business to advertise it in an appropriate and dignified way at the top of a sheet of fine note⁷paper, does not deserve to succeed. The sale of the crop is a very important⁷part of the year's work, and any man of sense and judgment must realize that a quotation scribbled with a pencil on cheap paper invariably suggests to the prospective buyer that the crop has very likely been grown under careless and untidy conditions and will probably be sorted and shipped in the same slipshod⁴way.

The question of cuts is also an important one. Look⁷through the catalogs in

the trade and see how many cuts are shown which give a pleasing and accurate representation of the variety advertised. Most of them are reduced so very small that all detail and individuality is lost. Many more are either so poorly made or so poorly set up and printed as to produce only an unsightly blotch. If an illustration does not fairly represent the flower, and does not produce in the mind of the customer a desire to see the original, of what use is it?

Those who issue catalogs in the flower and vegetable seed trade understand the value of good illustrations, and their color plates of roses, sweet peas, beans, etc., are *quite as large* and as beautifully colored as the originals, but when we come to the gladiolus section we find the same little caricatures which represent nothing of the beauty and attractiveness of our favorites, and the great majority of the readers get no hint of the wonderful development in size and coloring since the day of the little red and yellow "gladiolas" which grew in grandmother's garden.

Will some enterprising dealer please lead the way and show us some creditable illustrations?
S. E. SPENCER.

Bulbs by Parcel Post.

It would not be out of place for Gladiolus growers to do a little missionary and educational work with their Congressmen. Where the justice is in charging higher rates on bulb shipments than on ordinary merchandise under the new Parcel Post regulations, cannot be well understood. Bulbs are certainly entitled to as low a rate as any other product, and we should have it. Write your Congressman and tell him what you think about it, and keep the matter in mind, and tell other people about it who may have influence. This is not merely for the benefit of those who are doing a retail business, but is just as interesting to the wholesaler and the grower, as it will help the business in a general way to have low shipping rates on bulbs. The express

rates are much lower now, (since Feb. 1st, 1914,) and on packages of any considerable weight the express companies will, doubtless, get the business until the post rate is made somewhere near in proportion. At present on small shipments, if they could come under the Parcel Post classification, considerable saving would accrue to shippers. MADISON COOPER.

"Wayside Ramblings," as introduced by Mr. C. Betscher in this number, we hope to make a permanent department in which growers may "ramble" to their hearts' content so long as they do not step on other peoples' toes and confine themselves to a statement of their own opinions and offer in doing so some few grains of facts and information for the benefit of other people. High grade literary composition or exact rhetoric is not necessary. Just set down whatever suggestions or notes you think will be of some help to the other fellow.

Foliage of the Gladiolus.

Gladioli, as a rule, are rather scant of foliage, but it has long been my opinion that much could be done to improve the plants in this respect. When this improvement is attempted there will, of course, be much diversity of types--just as there now is diversity in spikes and in the forms of the flowers, but also, doubtless, these varied types would have their values. There would be for instance long drooping leaves, such as is seen on "Sans Parel" and leaves of the firm straight type like those of the species "Quartinianus" or those of the better known "America." Plants having wide leaves and others of a narrow leaf, will suggest themselves to the reader.

We have now some varieties that are of no special value for cut flowers but useful for supplying foliage, and these can well be grown for this purpose alone. Such varieties I have been growing for years in thickly planted rows. When a few of these plants were cut before blooming and were added to a bunch of

blooming spikes they invariably gave satisfaction to the customer, for they greatly improve the appearance of a vase full of these flowers.

This method also obviates the necessity of removing too much foliage from valuable plants and undoubtedly the removal of the leaves does great injury to the growing bulbs.

A. E. KUNDERD.

Under the title of "Some of the Newer Gladioli" we printed an article by J. R. Lawrence in our January issue, copied from *The Florists' Exchange*. Inasmuch as stocks of some of our leading growers were ignored in this report, it is probable that the trials made have by no means covered the "cream of the stocks of old and new world growers" as stated. It would seem, therefore, that an injustice has been done, and we wish to state that we are in no way responsible therefor, having copied the article from the source above mentioned as one of their contributed articles.

Our attention has been called to the fact that in the article by L. Merton Gage on "Packing Bulbs for Shipment," in our January issue, that the fraction $\frac{1}{8}$ inch diameter should read $\frac{5}{8}$ inch diameter, as it is not necessary to use shavings, etc., with bulbs smaller than $\frac{5}{8}$ inch. We are glad to make this correction, and call attention to same.

Every grower of the Gladiolus, both amateur and professional, should make it his special business to induce as many flower lovers to grow the Gladiolus as possible. It will be doing them a great favor, and you will have the satisfaction of knowing that you have made other people happy.

"Baron Joseph Hulot" (purple blue) combined with "Niagara," "Canary Bird" or "Buchanan" (soft yellows) make a most striking effect. The royal blue of "Hulot" contrasted with the yellows produces a harmony of color which is most effective.

WAYSIDE RAMBLINGS.

Value of a Single Gladiolus Bulb—
Green Crops for Fertility—Breeding of New Varieties—Difficulties in Interesting the Public—New Ideas in Gladiolus Breeding—Looking Futureward.

Query—Is a Gladiolus bulb worth \$1,000?

A bulb of as fine a white as Europa, a bit larger with the general character of some of our newer types would be very cheap at \$1,000. In 1907 we selected a bulb that was A No. 1. In 1910 the bulb-lets were ruined, but withal we expect to have over 100,000 of it by next fall. Some sorts could never be increased to that point. I should not be surprised to see bulbs sell for more than \$1,000, but they must possess abundant merit.

Green crops should be plowed down very early or after the plants have been somewhat ripened. A heavy crop of luxuriant growth at times will sour the soil and damage the crop. Our acres being somewhat limited it perforce compels careful study and culture to get best results. We plant rye in our Gladioli when cultivated the last time, the earlier the better. When possible it is well to grow corn or potatoes, getting them out early. The ground may be sown to a mixture of rye, corn and oats or similar mixture. Thus the annuals will make a rapid growth and freeze in early winter making available plant food early while the rye will continue to grow into the spring. If potatoes can be dug early similar treatment may be given. We have found that covering this growing crop with manure increases the growth, neutralizes its properties and leaves the soil in the best condition. This soil may be plowed quite wet if done early so that freezing will put the soil in best condition, or if plowed very late in the fall or winter may be worked very early in the springtime with a disk or spring tooth harrow, working it deeply.

The best fertilizer is ample quantities of water.

Intensive tillage rightly done is the best insurance for the future crop.

The grower who cuts spikes with much foliage is inviting disaster if he expects to sell bulbs.

The Gladiolus is hardly introduced to the public.

The great amount of breeding which is being done will bring some wonders—where rightly evolved. Plant breeding is an art, an art that must be backed up with science, but few of us that gabble "Scientific" have more than an ephemeral acquaintance with the word. Many "scientific" breeders are mere rut followers. True breeding has not yet begun, that is, for maximum results—The more we learn of plant breeding the more we are convinced that we are just starting to know something about it. When we worship "Pedigrees" we bow at the shrine of mediocrity. When breeding for results remember that "blue blood" often is very scorbutic, science may frown at "blue blood," hence caution must be exercised in breeding "blue blood" and employing "laws." Laws sometimes may not be as real as we presume them to be. Hybrids, crosses, etc. are merely arbitrary differences. The main thing is to get results. Results are what our work is judged by.

"Oh those stiff, heavy and formal Gladiolus—away with them!" When first I tried to sell the Gladiolus to an unappreciative clientele these words so often greeted my efforts and usually with the rub "Oh! they're so common!" It was very discouraging. This treatment perforce sent me in quest of something that less fault could be found with, and I began to seek for new types, but here I met new troubles in spikes not keeping well, less desirable colors, etc., etc. So began to breed a strain of my own. But results were very disappointing, very largely because of lack of knowing how, although I employed the rules then existing and still used. After a careful survey of various breeders and their work I had just about concluded to drop the work and discontinue growing the Gladiolus, when a few ideas dawned upon me regarding this work that caused me to follow different methods than those then and still in practice with many hybridists. I had made some crosses for experimental purposes solely, and saw that certain results could be obtained that were far above what I had hoped for. Again I saw that certain laws and ideas followed by the foremost hybridists with whom I came in contact, must be employed with reason and discretion rather than simply assum-

ing that so-and-so is the highest point of vantage in breeding. With this data I did quite a bit of experimental work to prove my contention, so let us take a look into future breeding.

The hybridist or breeder can evolve his ideal quickly if right methods are followed. "Laws" are sometimes misleading. "Pedigrees" do not spell highest results nor best blood.

If one does not get right results it is because wrong methods are used. When right methods are followed distinct advances are made quickly.

In five years the best Gladioli of the present will be eclipsed in every way.

The Gladioli of the near future will embrace less formality, the blooming period will be extended, earlier and later, better colors, much larger size, better spike arrangement, more individuality of the individual bloom, more substance, clearness, brighter, cleaner, longer spikes, taller plants, better foliage, better bulb and bulblet production, bulblets that grow much better, in fact an ideal away beyond what we have now, but above all a plant that will resist overwet and overdry conditions, heat, etc., and above all the very best of health and disease resisting qualities.

In a few years we shall have Gladioli that will bloom in fifty to sixty days, of quality superior to existing types so that we may say that in a few years we will be forcing Gladioli by the million, and we will have them in bloom for Christmas too, while with a little extra work we can plant them after March 1st, having them ready for May 30th.

In ten years the demand for Gladioli will make the present output look very small. One thing every one should do, discontinue propagating poor sorts and especially poor mixtures. Name only the extra good ones.

Two things we must consider—the highest quality—lowest price possible, to popularize the Gladiolus. We should utilize all our fairs and shows to stimulate a demand. We should also utilize the press, wherever possible to teach a love for the Gladiolus, its culture and uses.

The dollar being the world's greatest civilizer and missionary we must not lose the mercenary side of the question as the dollar is what we live by. C. BETSCHER.

COMMENTS ON ABOVE BY M. CHAMBERLAIN.
PRICE OF A SINGLE BULB—ACIDITY—
GREEN MANURE.

Many growers will, I think, dissent from Mr. Betscher's opinion that a single tho

ideal bulb "would be very cheap at \$1,000," for a conviction is growing upon them that the day of extreme prices has gone by. There are too many varieties of high grade being produced to admit of any one of them ranking at such value; and there is too much chance that your prize bloom of to-day will be outclassed to-morrow. Again no man—no sane man would give such a price for a single bulb unless the variety had been very thoroughly tested through two or three blooming seasons, and that would denote that there were many more such bulbs lying around somewhere, to come forth in due time and mock his efforts at gaining a monopoly.

While reading Mr. Betscher's paper I was set to wondering what crop he referred to as being damaged by acidity in the soil. Some plants thrive best in a sour soil, and is Mr. Betscher dead sure that the Gladiolus is not one of these? I have heard an experienced grower assert that the Gladiolus prefers the acidity.

It is well known that all humus making material, when rotting in the soil produces acidity, but this can be easily overcome by an application of lime.

If you desire to get the most possible benefit from the green manure you will plow it under when it is fullest of sap—"a heavy crop of luxuriant growth" is just what you need. M. CHAMBERLAIN.

Independence, Iowa, is somewhat of a Gladiolus center, two of the leading growers of the West, Mr. Geo. S. Woodruff and Mr. G. D. Black being located there. In response to the question as to which they regarded as the most promising of all the pure white Gladioli, they agreed that the Europa was at this time generally so regarded. Unlike the Rochester White and White Lady, it is disposed to multiply at a fair rate and it is generally quite healthy. Of course, this is not to be compared with the Chicago White, Peace and the Augusta, which, although generally classed as whites, have very considerable shading or markings of color in their petals. Mr. Black is the originator of a new yellow Gladiolus called Golden King, a very vigorous and hardy plant that is attracting a good deal of attention. The Panama, a pink, and Niagara, a cream colored variety, are both mentioned as among the profitable new kinds; also the Empress of India, which is the nearest black of all varieties of Gladiolus.—CLARENCE WEDGE in *The Farmer*, St. Paul.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Gladioli for Early Bloom.

TO THE EDITOR:—

Is it practicable to start some of the forcing varieties of Gladioli by putting them in pots and placing them in a hot-bed and transplanting them to the open ground later? Please let me know how early it would be safe to start them and how they should be treated. R. G.

Answer:—It is recommended that you should start such varieties as America, Mrs. Francis King, Brenchleyensis, Augusta and May about the last of February or the first of March. Put from three to four bulbs in a six inch pot and start them in a temperature of 50°F. These can be planted out in April or May depending on the season. Sometimes four to six weeks may be gained in this way on early blooms, but other seasons very little time indeed is to be saved. Again it is a question of bulbs. If they are young and grown from bulblets they are much more likely to do well started in this way.

Cutting Spikes of Gladiolus Bloom.

TO THE EDITOR:—

I am growing cut flowers for market and for exhibition at times and want some instructions on the best way of cutting the bloom, both as to retaining vitality in the bulb and to benefit the bloom and make it keep well in shipping. Should a knife or shears be used for this purpose? Complete instructions would, I am sure, prove useful to other of your readers as well as myself. C. R.

Answer:—One can hardly expect to have long cut spikes and at the same time strong bulbs. If the cut flowers are more desired, make a long slanting cut almost to the ground, on each side of the spike, cutting as little foliage as possible. If only narrow strips of leaves are left with plenty of moisture and good cultivation one may still secure a fair bulb.

We understand that some people break the spikes with little or no injury to the foliage and this might be done with some varieties such as Augusta, but many others have leaves higher on the spike and it is impossible to get a good length of spike without cutting them, but those leaves

near the spike are usually small and a good bulb can be grown without them.

The spike cut when first bloom is beginning to open and as long as possible without injury to the foliage, results in a better and larger bulb than if the bloom is not cut. Strength which would have been absorbed by the flowers goes into the bulb. A fast growth two years from bulblet with spike pinched out as soon as it appears, results in a thick strong bulb which can be depended upon to give the best bloom. The bulb the florist likes. Never use shears; they pinch the stem together preventing it from taking up water readily. Use a sharp, thin bladed knife. We advocate the slanting cut as a longer spike may be secured with less damage to bulb, and if spikes are shipped in an upright position and ends should become bruised in transit, they can still take up water to good advantage.

A. H. AUSTIN Co.

Vitality of American and Foreign Bulbs.

TO THE EDITOR:—

Considerable trouble has been reported by those who have planted foreign grown bulbs. They report an absolute loss of 25 per cent. to 40 per cent. or even more in some cases. Can you tell me anything about this, and the probable cause? Also, if the American grown bulbs are superior please explain just why they are superior, and is there any particular difference in the vitality of the bulbs grown in the eastern and central sections of the U. S? C. Y. K.

Answer:—In reply to the above question the answer as it comes to my mind is "Home Sickness". Observation during a number of years has taught us that imported Gladiolus bulbs do not do well the first or second year planted in this country, owing no doubt to such a complete change of climatic and soil conditions, whereas our American grown bulbs are acclimated and seem to take very kindly to American treatment.

In answer to the last part of the question we have never noticed any particular difference in the vitality of Gladiolus bulbs

in Eastern and Central sections of the United States, and we have seen poor bulbs, as well as good bulbs grown in both sections. A great deal depends on the condition of the soil and whether or not the bulbs are starved or fed.

I. S. HENDRICKSON.

Looking Backward and into the Future.

TO THE EDITOR:--

In the spring of 1858 an old gardener in the employ of a wealthy gentleman made me a present of three Gladiolus bulbs. When they came into bloom one proved to be a yellowish scarlet, one a dark red, and one a dull purple in color. They were of the old Gandavensis type with flowers not much over two inches in diameter, set closely on stalks two and a half to three feet high.

I grew and increased them for two or three years, but never saw any seed. I could see no reasons for this until I took up the simple lessons in Botany taught in school, and learned something of the formation of seed and the function of pollen. Being of an inquiring turn of mind I began to study my Gladioli, and soon noticed that the bees and humming birds seldom if ever touched the anthers or the stigma, and that was doubtless the reason I got no seed. I then bent the flower stalks together; taking care that the stigma of one flower touched the anthers of the flowers on the other stalk. I was rewarded by getting seventeen nice pods of seed.

This was the beginning of my work of hand crossing the Gladiolus. There were no books or literature that were available at the time, and I was compelled to work out the problems in my own way and I mention this to show what the beginner then had to contend with. There are good books now to help the amateur and beginner, and now that THE MODERN GLADIOLUS GROWER has been established to keep up the interest and spread useful information, I predict for it a great field of usefulness. It fills a long felt want, and all growers of the Gladiolus should give it their hearty support in every way possible.

Fifty years ago had anyone told me that we should see the marvelous improvement made in size, color and vigor of these flowers that has been made; I should have thought that he was demented and a fit subject for the lunatic asylum. I have seen the Gladiolus come up from the little two inch flowers on dwarf stalks to

the immense five to seven inch flowers on stalks tall enough to look an ordinary sized man right square in the face. The color, too, has kept pace with the other improvements; for we have colors unthought of years ago. We also have flowers of different types, notably the frilled and ruffled sorts of Mr. Kunderd, the great amaryllis-like flowers of the Princeps and its seedlings, and the fine lily-like blooms of the best Childsi. Nor must we forget the delicate beauty of the Primulinus Hybrids. We are no where near the limit of our possibilities judging the future from the past, and what the next twenty-five years will show I dare not predict. I am on the shady side of life and twenty-five years from now will be "lapped away under the daisies," but that the work will go on, and vast improvement be made I have not the least doubt. New species will be discovered that will give hybridizers new and before unknown forms; types will be produced, entirely different from any in cultivation, and colors that now are undreamed of will make their appearance. Those who are doing their best to make the old Gandavensis the standard and model for all Gladioli will, sooner or later, discover their error.

B. F. WHITE.

Forcing Gladioli.

[From the Florists' Exchange.]

I have been informed that imported bulbs of Gladioli America and others, except Colvillei, cannot be flowered in May or June, and will only flower the following January. In some of your notes I saw that someone had already cut flowers of America. How is it done? I have tried American grown bulbs of America and Augusta, but they were not very satisfactory so I am trying the imported bulbs.—F. M., N. Y.

Imported Gladioli bulbs of the large flowering type do not force well, and will not flower early. The American grown bulbs are used for forcing and are being sold for this purpose, and planted now. The varieties used are chiefly America, Augusta, May, Mrs. Francis King, and Chicago White.

The photograph illustration in the page advertisement of A. E. Kunderd, Goshen, Indiana, represents "White Ivory" the upper right hand corner, and "No. 9 G." lower left hand corner. These are two of the new Kunderdi type ruffled Gladioli, which are worthy the attention of all growers.

American Gladiolus Society.

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A. Parsons, G. W., 7345 Rising Sun Ave., Fox Chase, Philadelphia, Pa.
A. Patterson, Miss Emma E., Burlington, Wis.
P. Perkins, L. A., 10605 Fairmount Ave., Cleveland, Ohio.
A. Perry, E. P., No. Attleboro, Mass., R. F. D.
P. Pitzer, Wm., 74 Militarstrasse, Stuttgart, Germany.
P. Pierson, F. R., Tarrytown, N. Y.
P. Pinkerton, Robt. T., 70 E. Township Bank Bldg., Montreal, Canada.
P. Preeman, P. H., 2 Delft St., Haarlem, Holland.
A. Presby, Frank H., Upper Mountain Ave., Montclair, N. J.
A. Prestgard, Kristian, Decorah, Ia.
A. ReShore, Grace, Dowagiac, Mich.
A. Richardson, H. A., Woodsfords, Me.
A. Robertson, W., Jenkintown, Pa.
P. Roebuck, Arthur J., Winchendon, Mass.
P. Ross Bros. Co., Worcester, Mass.
P. Rowehl & Granz, Hicksville, L. I., N. Y.
P. Ruff, D. W. C., 733 Globe Building, St. Paul, Minn.
A. Schlotterbeck, Prescott, Ann Arbor, Mich.
A. Smith, Mrs. Chas., 400 Marshall St., St. Paul, Minn.
A. Smith, Miss Elizabeth, Gwynedd Valley, Pa.
P. Spencer, S. E., Lexington Ave., Woburn, Mass.
P. Spierling, W. A., 50 Barclay St., New York, N. Y.
A. Stevens, E. C., 24 Broad St., Boston, Mass.
P. Stevens, F. H., 143 Superior Street, Saginaw, W. S. Mich.
P. Stewart, E. E., Brooklyn, Mich.
P. Storrs & Harrison Co., Painesville, Ohio.
P. Stumpff, G. G., 50 Barclay Street, New York, N. Y.
P. Tait, C. S., Brunswick, Ga.
P. Teas, E. Y. & Son, Centerville, Ind.
P. Thomann, F. C., 846 N. Goodman St., Rochester, N. Y.
P. Thomann, Jacob, 836 N. Goodman St. Rochester, N. Y.
P. Tracy, B. Hammond, Wenham, Mass.
P. Tully, Norman E., Hubbard, Ohio.
P. Umpleby, John H., Lake View, N. Y.
P. Vanderkoff, D., care of C. Jonhheer & Son, Hillegom, Holland.
P. Vandermeij, Jno., Lisse, Holland.
P. Van Deusen, P., Sassenheim, Holland.
P. Van Konijnenburg, S. A. Co., Nordwijk, Holland.
P. Van Leenwan, Jno., Sassenheim, Holland.
P. Van Zonneveld, Jno., Sassenheim, Holland.
P. Vaughan, J. C., 31-33 W. Randolph Street, Chicago, Ill.
P. Velthuys, K., Hillegom, Holland.
P. Vincent, Jr., Richard, White March, Md.
P. Vlasveld, Simon, Hillegom, Holland.
A. Vollmer, Geo., New Hyde Park, L. I., N. Y., Box 283.
P. Vos, Firma P., Sassenheim, Holland.
P. Warnaar & Co., Sassenheim, Holland.
A. Warren, Mrs. B. S., Grosse Pointe Farms, Mich.
A. Wedge, Clarence, Albert Lea, Minn.
P. Werner Bros., Painesville, Ohio.
P. Wheadon & Sons, La Couture, Guernsey, C. I. England.
P. White, B. F., Terryville, Conn.
P. White, T. Y., Little Silver, N. J.
A. Wilkinson, W. A., Morgan Park, Ill.
P. Wilmore, W. W., Jr., P. O. Box 382, Denver, Colo.
P. Witherell, Edw. E., 73 Constitution St., Bristol, R. I.
P. Wolfgang, Harry G., Leetonia, Ohio.
P. Woodruff, Geo., Independence, Ia.
P. Wright, M. F., 1906 Smith St., Fort Wayne, Ind.
P. Youell, H., 538 Cedar St., Syracuse, N. Y.
P. Youngs, E. F., West Camp, N. Y.
P. Zangen, O. V., Hoboken, N. J.
P. Zeestraten, G. & Zonen, Oegstgeest, Holland

We were late in getting out the January issue, but the February issue is nearer to the first of the month. We hope to have the March issue out by the 3rd, so be sure and send in copy early.

THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.

Published Monthly by Madison Cooper, Calcium, New York.

Vol. I.

MARCH, 1914

No. 3

This variety is described by many as a blue, but in reality is more of a purple, blending to dark or royal blue. Some describe the color as a deep violet, or deep indigo. It has a stripe of light yellow on lower petals.

Planted or staged in combination with any of the soft yellow varieties the color harmony is very effective.



Spike, tall and graceful with many flowers open at a time. It is a strong grower and has good foliage. The flower is of medium size, but well arranged on spike and of graceful form.

Baron Joseph Hulot was originated by V. Lemoine & Sons at Nancy, France, and is the first of the so-called blue Gladioli to be worthy of the name.

GLADIOLUS—"BARON JOSEPH HULOT."

After Fifty Years.

[To Mr. and Mrs. Matthew Crawford, Dec. 1863-1913.]

What freaks Old Father Time does play!
Our life seems but a Summer day,
Its dewy morn is hardly past,
Its evening shades are gath'ring fast,
Seems scarce an hour could intervene—
Lo! Half a century comes between!

We've tramped the treadmill of the years,
Grinding its grist of joys and tears,
So busied with the toil and stress,
So filled with care and anxiousness,
We scarce have noted, day by day,
How fast the hours have trooped away.

But they have gone—The proof is ours.
No more we gather Springtime flowers,
No longer, with the birds and bees
Flit through fair scenes of Summer ease,
Ripe Autumn yields our garnered store—
'Tis Winter's bleakness lies before.

And by our side a growing throng
Has gathered as we've fared along,
Out of the dim, the vast unknown
The children come, our very own,
And children's children hold their hands
While entering Life's enchanted lands.

'Tis but the old, unceasing round,
We've trodden over beaten ground.
The thronging myriads of the past
And generations following fast
March on in one unresting throng,
Their Day, like ours, how short,—how long.

And so Life speeds. How bright—how brief—
From swelling bud to falling leaf.
Across the sky, an endless race,
Shadow and sun each other chase,
The precious hours flit fast way—
Life's Morn and Even are its Day.

Life's morning dawns in sunshine bright
Life's evening sets in glorious light,
And when the night comes darkly on
It holds the sunset and the dawn
Until the coming of the morn
When both are to new glory born.

So may our childhood's sunbright days
And the clear light of life's last rays
Commingle in the warmth and glow
Of the blest day to which we go
Where centuries measure not the sway
Of Life that passes not away.

—Wilbur A. Christy.

Gladioli Bloom For Market.

The question is often asked as to whether there is any money to be made in growing flowers for market. A great deal depends on local situation whether or not there is likely to be sufficient financial returns to warrant the time expended. Perhaps in a small town where there is no florist, a good trade could be built up, but if there is a floral establishment, the chances are against it unless the flowers can be sold direct to the florist. The expense of making a trial is small, and if it is not possible to sell the cut flowers the satisfaction secured will more than repay the effort.

Wallace's *Farmer* offers the following sensible suggestions:

"For spring planting, the Gladioli offers an attractive proposition if the market is promising. The advantage of this flower is that it furnishes a double crop—the blossoms and the bulbs. Aside from the pleasure of making money from Gladioli, there is no flower which will give more joy to its owner than this. There is enough beauty in one stalk to feast the eye, and it is a beauty which lasts for several days, unfolding new charms each day. If the stalk is cut when the second or third blossom is out, the buds will continue to open for several days, the first opened growing paler when removed from the sunlight. This bulb responds wonderfully to feeding, and in addition to the second bulb, which it often brings at harvest time, it produces from twelve to thirty bulblets, which, if planted the following year, yield blooming sized bulbs.

"Because of the rapidity with which they multiply, the prices of the bulbs vary. It is best to get one or two good varieties that are prolific multipliers, and not attempt to grow quantities of the cheaper sorts for market—there is practically no market for them. For home use, some of the better mixtures are delightful, furnishing a succession of surprises which no one should deprive himself of. A quarter—the price of admission to a state fair side show to view the tattooed man, the snake charmer, or the two-headed calf, will pay for from six to twenty Gladioli bulbs, which will give the children thrills of pleasure instead of shudders of repulsion."

Vaughan's Seed Store 1914 descriptive catalogue contains three full pages of French, Dutch and German Gladiolus novelties—a complete assortment, most of which are available at modest prices. Ask for a copy.

We want to illustrate the varieties *Brenchleyensis*, *Augusta* and *May*, and anyone having a good photograph of any one of these three varieties, several spikes preferred, will confer a favor on the editor by allowing us to use it for the purpose of getting a cut made.

Treating Diseased Gladiolus Bulbs.

[Written Especially for The Modern Gladiolus Grower.]

BY G. D. BLACK.

IT is with some diffidence that I am writing on a subject of so much importance as this, as I am not a college professor, and have no laboratory except the field and the bulb cellar.

I will confine myself mostly to my own experience, because I realize that theory often leads to more harm than good. There may be more than one disease that afflicts Gladiolus bulbs. I call the one with which I have had some experience Gladiolus scab. In some ways it resembles what is known as potato scab.

The scab is usually sunken, with a distinct line of demarcation around its circumference. It seldom destroys the life of the bulb unless very badly diseased, in which case the bulb will sometimes decay while in the storage cellar. The disease seems to do the most harm during the growing season by weakening the plant which sometimes dies before blooming. This is just the reverse of the effect of the bacteria which causes the nodules on clover roots and invigorates its growth.

We are told that these bacteria will keep the soil inoculated for years after the clover has been removed. Our experience seems to show that not much benefit will be derived from treating bulbs or potatoes if they are planted in soil where the diseases existed the previous season.

Gladiolus scab seems to be universal. Last season we had bulbs for testing from many of the growers in America and from about a dozen growers in Europe. We examined these lots carefully and they nearly all showed traces of this disease.

For several years we have treated our planting stock that showed any disease, same as recommended for potatoes. We find that for best results it is necessary to submerge the bulbs for a much longer time than for potatoes, because the coverings of the bulbs contain cavities that hold the air and exclude the moisture for some time, and because from the diseased parts there sometimes exudes a substance which forms a varnish-like coating that requires considerable time to dissolve. We formerly used corrosive sublimate, but for several years we have used formaldehyde.

A year ago we came into possession of a lot of very badly diseased bulbs. From these we threw out several hundred that we considered entirely worthless, but on second thought we decided to use them in an experiment. We divided them into

five equal lots. Lot No. 1 was planted without treatment. Lot No. 2 was soaked in standard solution for 12 hours. Lot No. 3 was soaked in a very strong solution for 24 hours. Lot No. 4 was soaked in standard solution for 48 hours and lot No. 5 in very strong solution for 120 hours.

The five lots were planted in same plot and received identical cultivation and care. Lot No. 1, which was not treated came up and started to grow well, but before blooming time some of the tops turned brown and died, and the remainder did not have the healthy dark green color like the four lots that had been treated. When dug the bulbs were very badly diseased. We expect to use these bulbs for further experiment.

Only about 25 per cent. of lot No. 5 grew, evidently being killed by the long immersion in the strong solution. The bulbs that did grow came up later and weaker than usual but made fine bulbs without a trace of disease. The other three lots grew well and produced healthy bulbs except that where lot No. 2 came in contact with lot No. 1, there was a trace of scab on a few bulbs.

For treating bulbs we put 35 gallons of water and 1½ pints of formaldehyde into a 50 gallon barrel. Above the barrel we hang a pulley from a joist or some other support. A small rope with a noose on one end and a hook on the other runs through the pulley. The bulbs are put in burlap bags holding about two bushels and put into the barrel with the noose around top of bag. A light weight should be placed on the bag so that it will be entirely submerged for five or six hours. Bulbs that show much disease should remain in the solution during the night. From 12 to 24 hours treatment does not seem to injure the bulbs and is much more effective in eradicating the disease. The bag of bulbs is raised above the barrel where it can drain a few minutes to save the solution, by pulling the rope and fastening with a hook.

The same solution can be used repeatedly, but the required quantity to completely cover the bulbs must be kept up by adding more water and formaldehyde in proper proportions.

Bulblets from diseased bulbs should be given the same treatment.

We now realize that our few failures were caused by not keeping the bulbs in the solution long enough.

Planting Suggestions.

[Written expressly for The Modern Gladiolus Grower.]

The experience of those who have planted closely, as noted in the January number, and have had good success tallies with mine. For want of garden space I have been obliged to utilize every inch and I have found that bulbs can be put very near to each other and grow well, furnishing good blossoms and strong bulbs.

I have made it a practice to try many new varieties each season and the question of keeping them separate was at first quite a puzzle. Now I plant such individual bulbs in double rows about four inches apart. These rows are "staggered," that is, a bulb in one row comes opposite the space between bulbs in the other. Every ten bulbs in each row are followed by a lettered stake. In the winter preceding when one has lots of time for such matters I arrange the bulbs in lots of ten, each marked, placing the ten in a paper bag with a card bearing a list of the names. In planting, place the ten in order of the card, mark the latter with the letter or number on the stakes enclosing them in the row, throw the cards into a box to be sorted and arranged later and as the plants come above ground they can be marked with tags to correspond with the card, these same tags going into the bag with the bulb and bulblets when dug up, to identify them. Such a method as this is, of course, useful only to those who grow in limited numbers, as if there are many of one kind, it is easy to mark the stakes with the name. A precaution against mixing varieties can be further taken with this system by being sure that kinds very much alike are not planted side by side. Alternate the reds, whites, blues and yellows and then if the stalks get crossed under ground, as they sometimes do when a stick or stone prevents them from coming straight up, it is easier to tell which is which when they blossom.

FRANK S. MORTON.

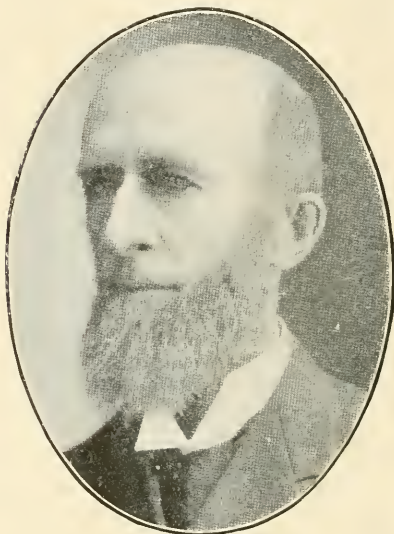
Forcing Gladioli.

[From the Florists' Exchange.]

The most foolish thing in forcing Gladioli is planting too early. Bulbs have a cycle of evolution that must be respected and considered, else disappointment is the result. *America* and similar sorts will make more money by subjecting them to a thorough drying by putting them into shallow flats in a place where a temperature of 60 deg. to 75 deg. can be maintained for three or four weeks; then plant late

in January or February, when a high per cent. will do well. Planted too early, many come blind. This will bring them into bloom in May and June. Such sorts as *Marie Lemoine*, *Jessie* and *Brenchleyensis* could be treated a month earlier, planted earlier and bloom fully four to six or more weeks earlier than *America*. In a few years we will be able to force all these sorts earlier. Gladioli are still "new." There are a number of movements taking place now that will soon mean wonderful changes in their growing. At least such is the view of

C. BETSCHER.



MATTHEW CRAWFORD.

A pioneer in the improvement of the Gladiolus.
Subject of our sketch on page 13 of the January number.

Varieties Commended.

The article appearing in February number of THE MODERN GLADIOLUS GROWER, entitled "The American Gladiolus Society, Trial Ground Work," is surely to be commended, but as criticism is invited have only this to say: It would appear that many of the good things are left out of the appended list, undoubtedly for the reason that corms had not been sent for testing. If such a list should be accepted by the amateur as the "Non Plus Ultra" of the Gladiolus world, would work a hardship on many grand varieties not therein contained.

JOE COLEMAN.

MRS. AUSTIN'S TALKS FOR AMATEURS.

NO. 2.—BE READY.

March is here, and neither the roaring of the lion nor too early appearance of the "March Lamb" can dim our joy, for March is the first month of spring and all nature is waking from its winter sleep.

In addition to our annual spring fever we are afflicted with the Gladiolus fever, for some of those varieties we sent for last month have arrived, and we are expecting others every day now.

It was a pleasant thought of the friend who sent us a gift of choice bulbs, and the dainty box with its word of sentiment appeals to our fancy. We will call it our *surprise box*, for we were surprised to receive it, and we know it is full of happy surprises for us. We look the bulbs over curiously, and noting the names, refer to the catalogues for the descriptions. We see among them several of those *early ones*—*Jessie*, *Chicago White*, *Hyde Park*—that we had overlooked, but would not like to miss from our collection.

One of the important points in Gladiolus growing is to *Be Ready*, and early March is still the time for sorting and looking the planting stock over. Be sure there are no culls or diseased bulbs. Destroy all suspicious ones, burning them is best.

Grade them into at least three lots besides the bulblets— $\frac{1}{2}$ to 1 inch in diameter; 1 to $1\frac{1}{2}$ inch and $1\frac{1}{2}$ inch and up. The large ones will bloom earlier than the smaller sizes, and when the blooms are ready to be cut it will save many steps if they are all in one plot. The No. 6 size $\frac{1}{2}$ inch and less, we will label "White skinned bulblets," and they may be planted similarly to the black hard shell bulblets.

After grading, count out a dozen, or a hundred, or a thousand, according to the quantity you may have, and measure the remainder, thus getting an estimate of the quantity in each lot. Label all, spread thinly in a cool place as they sprout quickly at this season.

We will now get variety markers for marking the rows in the field. There are many kinds, but one of the cheapest and best is wood splints, used for handles of the ordinary potato or fruit baskets and can be procured from any factory where such baskets are made. These strips are $\frac{1}{2}$ inch thick, 1 inch wide (sometimes a little wider) and 26 inches long. One strip will make two markers. Of course one end should be made pointed to go into the ground easily. These are usually of elm wood, quite tough, and will bend but not break easily. A horse weeder can be used over them and seldom break one.

We will anticipate a little hand hybridizing next summer, and prepare for it by getting a supply of plain shipping tags for marking the crosses, also useful in

VARIETY TEST OF GLADIOLI.

NAME.....	TEST NO.
SYNONYMS.....	
ORIGINATOR.....	DONATED BY.....
SPECIES.....	OBSERVER.....
	DATE.....

PLANTED.....

FIRST BLOOM OPEN.....

BLOOM—Size—Very large, large, medium, small, very small.

FORM—Tube—Straight, curved, slender, stout, long, short, compact, loose.

SEGMENTS—Equal, unequal, connivent, separate; color..... marking.....

UPPER—Horizontal, reflexed, broad, narrow; lower, straight reflex, broad, narrow.

STAMENS—Color of filament;..... of style;..... keeping qualities.

BLOOMING TIME—Early, mid-season, late.

SPIKE—Tall, medium, short, erect, drooping, free, fair bloomer, no bloom.

REMARKS ON BLOOM—

HABIT OF PLANT—Erect, drooping, tall, medium, dwarf, spreading, compact.

GROWTH—Good, medium, poor.

FOLIAGE—Well furnished, medium, poor; leaves broad, medium, narrow; veins prominent, obscure, light, medium, dark.

COMMERCIAL VALUE—CUT FLOWER—Extra good, good, medium, poor.

LANDSCAPE—Extra good, good, medium, poor.

VALUE FOR BREEDING.....

VALUE AS A WHOLE—Extra good, good, medium, poor.

REMARKS

marking varieties for further trial or to make note of some special trait, to be, if worthy, noted later in our special field book. These tags should be of good quality manilla, to stand the weather, and about the best size is $1\frac{1}{2} \times 3$ inches. These tags may be wired or strung now.

If deeply interested in testing varieties or growing seedlings, it is advisable to have variety test cards printed of which the one on the preceding page is a sample. Size is $5\frac{1}{2} \times 8$ inches, light weight card board.

And now, my lady amateur, (or professional) if you expect to spend much time with your treasures of the field, you should, with other spring sewing, make a Gladiolus dress. This must be made with long sleeves to protect the arm in carrying cut spikes, a rather short skirt of reasonable fullness, and a capacious patch pocket. This pocket is important for it must hold a memorandum book, test cards, pencils, marking tags, sometimes paper bags, a knife and numerous other things. Better get that knife now, and be careful to choose one that fits the hand. It should have two blades, thin and rather narrow, the larger especially suitable for cutting spikes, and one of the uses of the smaller to gather pollen.

We hope the plot was especially planned and prepared last fall. If not, give it a heavy mulching of barnyard manure *now*, and be ready to plow early.

MRS. A. H. AUSTIN.

American Gladiolus Society.

Public notice is hereby given that the following named Gladioli have been registered with the American Gladiolus Society by the A. H. Austin Co., Wayland, Ohio. The varieties were grown on the trial grounds at Ithaca, N. Y., and are distinct from all other varieties tested. The following are the originator's descriptions:

RAISER'S DESCRIPTIONS.

Bertrex—Color white with lilac lines in throat. Size and form of *America*. Spike tall, straight, branching. A little more slender and graceful than *America*. Increases rapidly; takes up water well.

Candidum—Large white blooms. Tips of petals tinted and somewhat reflexed like a lily. Spike tall, erect; free bloomer, 48 blooms on main spike and two side branches.

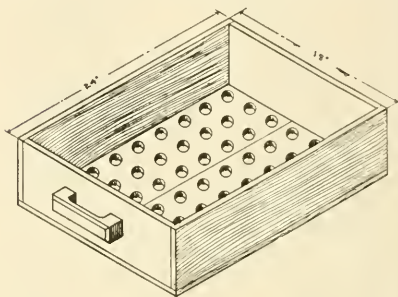
Rose Wells (No. 55)—Large, wide, open blooms; light rose, clear color with small, attractive blotch of lilac rose and yellowish green. Very tall branching spike, straight, slender and graceful.

Easter Bells—Blooms of large size, sulphur yellow, faint carmine lines in throat; tall, straight spike; free bloomer and robust grower.

A. C. BEAL,
Chairman Nomenclature Committee.

An Inexpensive Grader.

To separate Gladiolus bulbs into the various grades (sizes) after topping and rooting, a device like the one shown in the cut is a great help. Take a grocery box 18×24 inches, or larger, and about six inches deep, and with an expansion bit bore several rows of holes in the bottom $1\frac{1}{2}$ inches in diameter, smoothing them with a pocket knife. The holes may



be quite close together. Into this box pour bulbs of all sizes and shake out all that will go through the holes. What are left in the box will be first size. Another box made in the same way with one inch holes will catch the second size. The third size may be secured with an ordinary one-half inch mesh sieve.

L. A. PERKINS.

B. F. White Offers Prizes to Club Raisers.

B. F. White, Terryville, Conn., offers 25 of his Gladiolus, *King Philip* to the person sending in the largest number of subscriptions to THE MODERN GLADIOLUS GROWER up to May 1st, 1914, and to the person sending in the second largest number of subscriptions he will send one dozen bulbs. As the retail price of *King Philip* is \$5.00 per dozen it will be seen that Mr. White is making a very liberal offer.

THE MODERN GLADIOLUS GROWER already has many friends, and they are all disposed to help it, and the liberal offer by Mr. White entirely at his own suggestion is a sample of what is being done for the new publication by those who have Gladiolus growing at heart.

American Gladiolus Society.

GLADIOLUS REGISTRATION.

The Nomenclature Committee has approved the applications to register the following varieties of Gladioli:

JOHN LEWIS CHILDS, Flowerfield, N.Y.

Aline,	Adolf Jaenicke,
Barclay,	Brilliant,
Burlington,	Boston,
Canary Bird,	Columbia,
Compacta,	Capt. C. B. Tanner,
Contrast,	Dr. Sellow,
Dorothy Burnham,	Deborah,
Duchess,	Expansion,
Edna,	Fantastic,
E. L. Oakley,	George Vollmar,
Glare,	Gov'nor McCormack,
Geo. B. Remsen,	Gracilis,
Glowing Coal,	Harmonia,
Harlequin,	Imperial Pink,
Helen,	Irene,
I. S. Hendrickson,	Kate,
Jay,	Kearney,
Keokuk,	Lael,
Lavander Queen,	Leonard Joerg,
Lemon Drop,	Little Violet,
Little Blush,	Lizzie,
Livonia,	Marginata,
Lydia,	Mayor,
Marion,	Mohonk,
Melrose,	Mrs. Beecher,
Morning Star,	Mrs. R. A. Goldsmith,
Mrs. La Mance,	Mrs. W. N. Bird,
Monster,	Norma Dee Childs,
Nezinscott,	Old Oxford,
Oddity,	Prince of India,
Prescott,	Rosedale,
Portland,	Rosy Spray,
Roseann,	S. Parnell,
Salmonia,	Sunlight,
Salmon,	Saratoga,
Spot,	Siboney,
Salem,	St. Louis,
Splendor,	Sulphur King,
Superb,	Variabilis,
Torchlight,	Wm. Falconer,
Waukesha,	Wild Rose.
Wyandanch,	

ARTHUR COWEE, Berlin, N.Y.:

Afterglow,	Baltimore,
Berkshire,	Berlinia,
California,	Cracker Jack,
Cremilda,	Daytona,
A. Dimmock,	Evolution,
Faust,	Giant Pink,
Intensity,	La Luna,
Meadowvale,	Peace,
Philadelphia,	Rosella,
Rutland,	Scarsdale,
Snowbank,	Snow rd,

Taconic,	Victory,
Vivid,	War,
White Cloud,	Witch.

CHAMBERLAIN & GAGE, Wellesley, Mass.:

Clarice. (Kunderd.)
 Daisy Rand, (Kunderd.)
 Dorene, (Kunderd.)
 Lillian Morrissey, (Kunderd.)
 Mary Bancroft, (Kunderd.)
 Mary Fennell, (Kunderd.)
 Mrs. Montague Chamberlain, (Kunderd.)
 Mrs. Malcolm Mackay, (Kunderd.)
 Mrs. G. W. Moulton, (syn. Magenta,) (Kunderd.)
 Mrs. Frank Pendleton, (Kunderd.)
 Rajah, (Kunderd.) There was a Gandavensis variety of this name introduced in 1894, but the introducers say it is now out of cultivation and give their permission to use the name.
 Spring Song, (Kunderd.)
 Wachusett, (Kunderd.)

A. E. KUNDERD, Goshen, Indiana:

Arizona,	Azalea,
Cardinal King,	Cherry King,
Chicago White,	El Capitan,
Ivory,	Improved May,
Ida Van,	Governor Hanley,
Kunderdi Glory,	Kunderd's Orange,
Myrtle,	Mrs. A. E. Kunderd,
Mottled America,	Pride of Goshen,
White King,	Youell's Favorite.

E. E. STEWART, Brooklyn, Mich.:

Black Beauty,	Bouquet d'Or,
Chocolate Drop,	Embossed Yellow.
Golden Queen,	Lucille,
Sulphur Queen,	
President Taft. (Has prior right over Vilmorin's variety.)	

G. D. BLACK, Independence, Iowa:

Burrell,	Golden King,	Maude.
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D. W. C. RUFF, St. Paul, Minn.:

Thomasena.

A number of other names have been submitted and which the committee has under consideration. As soon as their eligibility has been determined another list will be published.

A. C. BEAL, Chairman.

Some of the best authorities agree that "Rochester White" and "White Lady" are so nearly alike that they cannot be distinguished except with extreme difficulty.

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Special favors to none, and a square deal to all.

Canadian and Foreign
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Growers are invited to contribute articles or editorials over their own signatures, but the Editor reserves the right to reject anything which in his judgment is not conducive to the general welfare of the business.

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Vol. I

EDITORIAL

No. 3

Types of Gladioli.

Much has been written regarding the proper type of spike and flower for the perfect—the most beautiful Gladiolus—apart from its color, and doubtless much more will be written on this subject, for the flower has many possibilities and a great future.

With a long list of species, so called, of varying character, an almost endless variety of types and color combinations will be developed and no one need fear that any great harm will come from any arbitrary standard that may be set up.

Recently some of the trade papers reported a new ideal spike, as being "the newest from France," and advocated the abandonment of all others.

With nature favoring the Gladiolus with many types, why should originators and growers restrict themselves to an arbitrary standard set up by men, any more than do growers of orchids. Does not much of the interest and pleasure of growing Gladioli come from their almost unlimited diversity—again as in the orchid.

The commercial side of Gladiolus growing will have its fashions and its demands, but the development of new types and new color combinations and greater beauty will always be the aim of the skilled specialists and will always find an appreciative public.

Then long live the Gladiolus—the most beautiful of summer flowering bulbs—the Queen of them all. A. E. KUNDERD.

Treatment of Gladiolus Bulbs.

Many customers write me asking the question: "Should the husk be removed from Gladioli before planting?" Thinking this question properly answered might be of assistance to some of the readers of THE MODERN GLADIOLUS GROWER, I am taking the liberty of submitting what I consider from experience, the proper answer:

Emphatically No. The husk not only prevents bruising, but is a protection against foreign matters in the soil, the contact of which with the bulb might start a rot of some nature, especially should the bulb come in contact with green stable manure.

The tough husk also is more or less of a barrier against the attack of wire worms and other insects. There is no harm in splitting the husk on top of the bulb, in fact this is desirable with some varieties upon which the husk is especially tight, and when two or more spikes will grow from the same bulb.

Another important point to which I wish to refer is this: When receiving Gladioli bulbs from your grower or seedsmen, if you wish to delay planting, for some days or weeks, do not fail to unpack

the bulbs and store in a dry cool room, otherwise they may be sprouted, or heated, either of which reduces the vitality of the bulb, and is sure to show at blooming time.

ARTHUR COWEE.

"A Rose By Any Other Name Would Smell as Sweet."

We will not attempt to settle the controversy over the pronunciation of the word *Gladiolus*; neither will we take sides. We want to suggest, however, to those who use the newer pronunciation that they should not regard those who use the older way as old fashioned or uneducated, and we want to suggest to those who use the old way of pronouncing that they should not regard those who accent the "di" as pedantic or finical. Both ways of pronouncing this word are correct and we use both ways ourself, and shall probably continue to do so.

At any rate the *Gladiolus* has qualities which make it one of the most desirable of all flowers, and no matter how you pronounce or mispronounce its name, the flower itself will remain supreme to the end of the chapter

MADISON COOPER.

Bulbs or Corms?

The individual pretending to a knowledge of plants who should mistake a cauliflower for a cabbage would be laughed at by everybody, yet such a mistake is not as bad as calling the underground portion of the *Gladiolus* a "bulb." As a matter of fact the cauliflower is a kind of cabbage—a cabbage with a college education, someone has called it—but the *Gladiolus* "bulb" is not a bulb in the scientific sense and never can be. To be sure, one definition in the dictionary makes it possible to apply the term bulb to any bulb-like part of a plant, but in these days of scientific plant-breeding it is well to be on the safe side. There is no telling when some of these scientific wights who use only the correct scientific names may happen along.

A true bulb is an underground, budlike

part consisting of a very short stem bearing numerous small leaves or leaf bases. The bulbs of onions and lilies are good examples. In the *Gladiolus*, the underground part is entirely stem. Such a structure is properly a corm and not a bulb. Small corms are cormels.

Of course it will not make any difference in the size and color of the flowers or the price of the plants if we call the parts bulbs instead of corms, unless, perhaps, we might raise the price a little to the man who insists upon our being scientific and calling the things corms.

WILLARD N. CLUTE.

In our "Queries and Answers Dept." this month "F. P. H." asks where he can secure *Gladiolus* seed, and considering the fact that none of our advertisers mention especially that they have seed for sale, it is suggested that they should do so. Amateur growers of the *Gladiolus* should be encouraged to grow the *Gladiolus* from seed, as it keeps up a wonderful interest in the work, and all wholesale growers who have seed for sale should advertise it.

Publicity for Gladioli.

There can hardly be a question but that one of the best ways to popularize the *Gladiolus* is to show at the Autumn events where the greatest number of people naturally assemble. The local grower should show at his county fair, and the growers throughout a state should make the state fair a "round-up." Those throughout the country should endeavor to be present and exhibit at the annual meeting of the American *Gladiolus* Society (held in connection with the S. A. F. and O. H. in Boston this year.) If Boston is too far distant for some of us, then we can strike middle ground and show at the second annual exhibition of the Ohio *Gladiolus* Society to be held in Cleveland the third week in August. The first show was a decided success thanks to the untiring efforts of Mr. Wilbur A. Christy, secretary, and the various committees. Nearly seven

thousand spikes were staged and it is to be hoped that ten thousand or more spikes will be placed on exhibition in Cleveland this year.

The Gladiolus boom is getting under way and will eventually win out from sheer force of merit, but all can assist in hastening the coming tidal-wave of popularity such as has never been enjoyed by any other flower. PUBLICITY is the word. Everyone should know of the merits of the Gladiolus.

JOE COLEMAN.

Good photographs of the Gladiolus are not plentiful. This is not so much because of the difficulty of securing good photographs, but rather because a good camera may not be available at a time when the best of bloom is at hand. In staging or posing a bloom for photographing, it is important that a white background be used if the color of the flower is dark and a rather dark background be used if the color of the flower is light. Of course much depends also on the light available.

Many make the mistake of photographing one spike only. Photographs of two spikes are standard, and sometimes three or more are advisable.

Further suggestions along this line are requested from our readers.

"Panama" Gladiolus Honored.

The high quality of *Panama* is too well known to need comment, but it is worth mentioning that Mr. Warnaar, of Sassenheim, Holland, has adopted the name of this variety as the name of a new villa or summer residence which he has just built, and has had carved in stone and set in front of this new villa the name *Panama*. It is said that Mr. Warnaar paid the late Frank Banning, the originator, over \$6,000 in one season for bulbs of the *Panama* Gladiolus.

Note the large amount of practical information contained in each issue of THE MODERN GLADIOLUS GROWER. Much of this has a permanent value, and it will all be accessible by means of a carefully compiled index. Bound volumes at the end of the year will be worth \$1.00 each. Save your copies and secure the index.

Artistry in Staging.

It should be obvious to everybody, and to none more than the florist, who lives by, and in, a realm of artistry, that skillful and finished workmanship in the grouping of plants, the arranging of floral harmonies or captivating contrasts, or in the proper placing of vegetables, pays. Taste, and taking pains, have won many a man a first prize and a pocketful of dollars.

The British have a saying: "Business follows the flag." We, as florists, are under a flag too, but not a banner of militancy. Ours is exactly the opposite—one of peace; but we do not object to doing trade, in fact being busy suits us. Our exhibitions, therefore, ought to be models of finished good taste. Happily they are, in the majority of instances. We have been particularly struck with this on the occasion of recent Autumn shows where the layout and color combination have been quite evidently the result of aforethought.

One feature might be added at some of the shows, although the hall would probably require to be large and tall, and that is, a pillar group. It is the practice to offer competition for the best draping of, and grouping around, the pillars of the hall at some exhibitions, and such a class has points to recommend it. Another item that the organizers of Fall shows might well encourage, is a basket of foliage, berries and flowers, or of foliage and fruit. The one objection would appear to be that everybody might wish to compete! But if the schedule were carefully worded, the committee would assure themselves of a very pretty feature. Wherever possible also, a competition for decorated dinner tables ought, we think, to be arranged, for the ladies do so love to judge the judges. Whether the judging ought to be done by the womenfolk entirely, by ballot, is worth considering.

And lastly, by the offer of a really substantial prize, the perfection of culinary produce ought to be represented at our Fall shows, and to attain the best artistic staging of these, most of the competitors have far to travel. At Madison, N. J., and Lenox, Mass., one or two have shown the way. The rest is only a matter of time.—*Florists' Exchange*.

Those having good photographs of any of the older varieties would confer a favor by sending prints of same to THE MODERN GLADIOLUS GROWER. We want to illustrate and describe at least two varieties each month.

WAYSIDE RAMBLINGS.

SUGGESTIONS AND THE AMERICAN
GLADIOLUS SOCIETY.

I have read the President's address with great interest, also the Secretary's report of the last meeting of the American Gladiolus Society. Mr. Gage says, "I want to say this much,—that the amateurs must do their share in keeping up the interest and standard of the 'Bulletin,' by contributing to its pages."

That is all very well,—but what has the Society done to keep up the interests of the Amateurs? With but one single exception there has never been an amateur among the officers, or on the committees; and in the list of prizes at the shows, none were offered that one amateur in a hundred could compete for. I am not saying this in any unkind or fault-finding spirit; but it appears as if the Society had shown a mistaken policy, in not giving amateurs a chance.

The officers are all capable and honorable men but being in the Gladiolus business in a commercial way it looks as though they were overanxious not to hurt the trade; and have left undone some things that, manifestly, ought to have been done.

Now, regarding giving new names to old varieties and selling them at a fancy price. This is one of the most contemptible, dirty, little swindles ever invented. A few years ago I got some bulbs of a variety called *Blue Jay* (paying 50 cents each) from one of the great seed firms of New York City. When they came in bloom they were the variety *Baron Josef Hulot* which I had been growing two years from bulbs got from France. Mr. Cowee was sending out at that time a *Blue Jay* that is worthy of the name for it has the colors to warrant the name; but *Baron Hulot* has no more resemblance to a *Blue Jay* than a blue jay has to a crow-black bird. The same swindle has occurred a number of times in my experience. This is why I say that the officers of the society have left some things undone. Take the case of the so-called *Rochester White*, a variety that is in every way identical with the old *White Lady*;—a variety that has been on the market for years. No living man can see any difference in them; either in the flower, plant, bulb, or manner of growth;—yet the society awarded prizes to *Rochester White* at Rochester, Baltimore and Minneapolis shows. Here was an opportunity for the

society to stop a fraud and failed to do it; and went on and allowed it to be advertised in the "Bulletin". Is it any wonder that it is hard for the society to grow and keep up the amateur's interest in the "Bulletin?"

When the "American Gladiolus Society" cuts out the commercial idea, and settles down to the real purpose of improving the Gladiolus; then, and not until then, will it grow and prosper as its founders expected. Now to take up the matter of amateur prizes at the shows—numbers 22 and 23 at the last show are an illustration. To have twenty-five spikes of one variety good enough to show, the amateur would have to have at least one hundred full sized blooming bulbs. Now, I do not believe any amateur wants one hundred of any one variety; so how is it possible for him to get such a premium? No amateur ought to be compelled to show more than two or three spikes of any one variety, to compete for any prize.

Give the amateurs a decent chance, and they will help the shows to success. Give them a reasonable representation among the officers and committees, and then the society will be able to stand on its own feet, and will not need to be merged into any other society or organization.

Another thing that has tended to discourage amateurs and producers of new varieties, is the fact that there has been no published report made of the varieties sent to the experimental grounds established by the society, for testing new or old varieties. What becomes of the bulbs? Those sending valuable bulbs for testing certainly ought to know something about them. These things all work against the welfare of the society, it seems to me.

The secretary shows clearly that he is against this renaming swindle, and I am with him heart and soul; and if there is any way to check this torrent of commercialism that is running rampant through the Gladiolus industry, all over the world, I am ready to help.

B. F. WHITE.

COMMENTS ON THE ABOVE BY M. CHAM-
BERLAIN, PRESIDENT AMERICAN
GLADIOLUS SOCIETY.

There are many suggestions in Mr. White's paper that are timely and of real value, and some of his criticisms of the American Gladiolus Society are well deserved.

We have not paid the attention to the amateur element which it deserves and which would repay the commercial element to yield. In this the commercial element has been blind to its own interests,

for we can increase our sales more readily by the aid and sympathy of the amateurs than by the narrow and selfish policy of ignoring them—which has been the general policy of the Society. We have offered them medals as prizes, but we have made no effort to interest them in the work of the Society.

But Mr. White is unfair when he leads his readers to infer that there were no prizes offered at our last exhibition which an amateur had any chance of winning. The "open classes" were all open to amateurs and in those classes were a long list of competitions into which many amateurs might have entered.

Many members of the Society are so strongly opposed to renaming varieties and exhibiting them as "new" seedlings, that they would vote for the expulsion of a member who was proven guilty of such a practice. But of course this must be proven before action could be taken. The Society would not be justified in expelling a member because some persons *think* that the "new seedling" is a renamed veteran.

Another act nearly as bad and quite as open to severe censure is that of entering a competition as an amateur when you are growing bulbs for the market and advertising them for sale. Perhaps Mr. White had not thought of this when championing the amateurs.

If Mr. White will bring these matters before the meeting of the Society next August, he will, I am sure, be given a hearing.
M. CHAMBERLAIN.

A QUESTION OF NOMENCLATURE.

TO THE EDITOR:—

The initial edition of your paper came to hand this week and needless to say has been very carefully looked over. I want to say that I approve of it from cover to cover, even of the Holland "ads." As in most things that we approve of, there are a few minor points that we take exception to, for instance:

In the article by J. R. Lawrence, page 10, he notes *Jean Dieulafoy*, *C. M. Kelway* and *Lady Montague* as identical. They are about as identical as *Peace* and *Europa*. I refer here to *Dieulafoy* and *Christine Margaret Kelway*, never saw *Montague*. *Kelway* is much better in color than *Dieulafoy*, is taller, has a strong splash of yellow in throat, of which *Dieulafoy* has't a trace, or if so, very faint. The lower or inferior petals of *Kelway* are much longer, making the vertical measurement of the flower fully 1 inch longer than *Dieulafoy*. All petals of *Kelway* are more pointed and

shade to quite strong pink on both front and reverse. Reverse of *Dieulafoy* is not nicely shaded, showing more or less purple, giving more the effect of stain than shading. *Kelway* shades beautifully from base to tip of petals. I might mention also that the foliage or leaf is not more than two-thirds as wide as that of *Dieulafoy*.

Mr. Black on page 11, finds *Grenadier* and *Velvet King* identical. We offer both of these varieties in our wholesale and retail lists. They are offered as distinct. At Cleveland, last summer, I called the attention of Mr. Matthew Crawford to our vase of *Grenadier* and he stated that he had never seen it before. I believe that the variety, *William Mason*, one of the names used by Mr. Black, is one of Mr. C's. introductions and it would seem to me that he would have remarked any similarity in these two varieties.

We had *Velvet King* and *Grenadier* growing side by side in field this summer, and if I remember correctly the attention of the Ed. MODERN GLADIOLUS GROWER was called to this controversy and the two varieties were shown him while on a visit to us this fall. These two sorts are as similar as *Princeps* and *Nezinscott*. *Velvet King* is the larger, flower lacks the texture of *Grenadier* and is to my mind, much inferior in color. We are growing about twenty reds and in the field *Grenadier* will attract attention first of all. Planted in the midst of the other reds it makes a red streak and the edges of the block are sharply marked by the change in shade. It is evident that Mr. Black has never seen *Grenadier*, although I thought we sent him some this past spring.

I will be glad to send Mr. Black and also the GLADIOLUS GROWER (who should run a test plot) bulbs of both varieties this spring and get this matter settled. By the way, Mr. Crawford also mentioned another variety *Grace Henry* as being in on this matter of similarity.

RALPH E. HUNTINGTON.

Next month there will be an article on "Growing Gladioli Under Irrigation in Colorado" by W. W. Wilmore, Jr., of Edgewater, Colo. What Mr. Wilmore is doing under Colorado conditions would be altogether feasible most anywhere, and what he says is, therefore, worthy of close consideration. The editor has the Skinner System of overhead irrigation on his half acre gardens, which worked wonders during the drought last season. This makes a little story all by itself which we may have occasion to tell another time.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Gladioli from Seed.

TO THE EDITOR:—

In Mr. Betscher's article on raising seedlings he says leave the sacks, burlaps, &c., on till the young plants are two inches high. Will not many of the plants grow up through the sacks, and be pulled up when the sacks, &c., are removed?

Will not the young plants be so bleached, that when exposed to the hot sun they will be scorched and wilted, or killed outright? These are practical questions and a practical answer is desired.

E. T. F.

Answer:—I might have gone more into detail but space usually must be limited. Only a few will be 2 inches high when the main lot is just coming through the soil. We at times take burlap, &c., off about 4 P. M. and put them on at 8 A. M., keeping soil damp. When a cloudy or rainy day comes and the plants are coming up fine we leave them off, but keep damp.

Very few will bleach or scorch. It was not presumed that very heavy sacks or burlaps be used.

C. BETSCHER.

King to Vaughan's Seed Stores several years ago for a good round price. Some years later the same firm bought his stock of No. 312, and introduced it to the public as *Velvet King*. Another of Mr. Coblentz's varieties, a brilliant red, *Mrs. Scott Durand*, is worthy of notice.

In a recent letter he says, "I formerly sent sorts for testing free with stock purchased. I have found this to be the greatest mistake, as in the hands of several growers they get several names." This partly explained why his No. 312 and No. 54 (*Taconic*) have been listed under so many different names.

The writer has never personally met Mr. Coblentz, but an extended correspondence and mutual love for the Gladiolus has developed a bond of friendship between us. If he were not so modest about appearing in print he might impart valuable information through THE MODERN GLADIOLUS GROWER.

G. D. BLACK.

P. O. Coblentz—Originator of Gladiolus "Mrs. Francis King."

TO THE EDITOR:—

We want to know something about the men who have originated the standard kinds, especially the older ones. For instance, Mr. Black mentions P. O. Coblentz, and we know that this gentleman has his name attached to one of the most popular varieties of the day—*Mrs. Francis King*. Who is or was Mr. Coblentz?

M. S. F.

Answer:—P. O. Coblentz lives at New Madison, Ohio, a small town near the western boundary of the state. Although situated one hundred miles or more from the cities of Cincinnati, Cleveland, Columbus and Indianapolis, he has demonstrated for a number of years that it is possible to build up a large and profitable business in growing and shipping cut Gladioli to those cities, and he has done this with varieties mostly of his own growing and selection.

Mr. Coblentz has been instrumental in giving us some of our best varieties. He sold most of the stock of *Mrs. Francis*

Planting Bulblets in Cold Frame—Gladioli from Seed.

TO THE EDITOR:—

Would there be any advantage in planting bulblets in a cold frame quite early in the spring to give them a good growth the first season? Would it prove worth the trouble? I would like to know where I can secure Gladiolus seed.

F. P. H.

Answer:—It is exceedingly doubtful if there would be any business advantage in planting bulblets in a cold frame early in the spring so as to give them larger growth, unless possibly the variety were a very rare and valuable one. The extra labor and expense would hardly be justified. If planting blooming size bulbs for cut flowers it might be advisable to use cold frames as suggested to secure early bloom in advance of the regular season.

You can secure Gladiolus seed from our advertisers, although it is not especially advertised. Some growers do not grow seed, and others who do save the seed will not sell it, but among our advertisers there will be at least a few who will be

willing to dispose of any reasonable quantity of seed.

You will find the growing of Gladioli from seed a very interesting work unless you expect too much. Please note what is said in this line in the January issue of THE MODERN GLADIOLUS GROWER. The most of the varieties resulting from seed are worthless, but there are always a few which are extra good and a very few which may be classed as fine.

MADISON COOPER.

Gladioli in Rows.

TO THE EDITOR:—

Which method in planting the larger sizes of Gladiolus bulbs is the best and most saving of labor, the single row, or two, three, or more rows in the same furrow? Which method is the most practiced?

E. T. F.

*Answer:—*I believe the majority of growers employ the double and triple row system for the reason that it is surely much more economical to plant 100,000 bulbs on one acre than the same number using two acres or more.

The single row method is sometimes thought the best where one grows Gladioli for the cut flowers and wants larger blooms.

L. MERTON GAGE.

Gladiolus Blue Jay and Baron J. Hulot.

TO THE EDITOR:—

Are the Gladioli *Blue Jay* and *Baron Hulot* identical? I understand it is claimed that the former originated with Mr. Groff and the latter was sent out by Messrs. Lemoine & Sons, of Nancy, France. One prominent dealer lists them as the same. Another grower offers *Blue Jay* at 75c. each and *Baron Hulot* (*Blue Jay*) at 10c.

The identity or difference should be stated by some one in authority.

E.

*Answer:—**Blue Jay* and *Baron Hulot* are two distinct varieties, the former having been originated by Mr. H. H. Groff, the latter by V. Lemoine & Sons. The variety *Blue Jay* (so described by reason of the coloring being similar to that of the bird) was named several years prior to the renaming of the variety *Baron Hulot* by one of our American growers who was informed at the S. A. F. Convention at Dayton, Ohio, 1906, that the variety named *Blue Jay* by him was *Baron Hulot* and not *Blue Jay*.

ARTHUR COWEE.

*Answer:—*Gladiolus *Blue Jay* offered by Arthur Cowee is different from *Baron Hulot*, although *Baron Hulot* was called *Blue Jay* for some years, and is at the present time by some people. The story of it is as follows: Seven or eight years ago John Lewis Childs imported some blue

seedlings from Germany. When they came into bloom we selected one of the varieties as being especially good and called it *Blue Jay*, listing it under this name for two or three years. When the variety *Baron Hulot* was offered in Europe, we secured some and found it identical with the one that we were calling *Blue Jay*. Several years ago Mr. Groff introduced a variety under the name of *Blue Jay*, since which time we have gradually dropped the name of *Blue Jay* out of our list and used simply the name *Baron Hulot*.

I. S. HENDRICKSON.

Mons. Brunelet.

TO THE EDITOR:—

We see the name of Brunelet attached to many French varieties. Who is or was Mons. Brunelet?

S. M. F.

*Answer:—*Mons. Brunelet is a French grower who has originated many varieties which are put on the market by the firm of Vilmorin Andrieux & Co., Paris, France. While he has originated a great many varieties, I am not really familiar with any that are well known in America.

I. S. HENDRICKSON.

Which Spelling is Correct?

There is some difference of opinion as to the correct spelling of the name *Baron Joseph Hulot*. The second word is the subject of debate and is sometimes spelled *Josef* and sometimes *Jules*.

The authority to which this must be referred is the pamphlet issued by V. Lemoine & Fils of Nancy, France, containing a list of "Gladiolus Hybridus Lemoinei," and in that list the name appears *Baron Joseph Hulot*. As Victor Lemoine originated the variety and gave it its name, he had the right to determine the spelling thereof.

Another name that is frequently misspelled is the *Jane* of *Jane Dieulafoy*. It is oftener seen written *Jean* and occasionally it appears as *Jeanne*, but both are wrong, for in Lemoine's book, it appears as plain *Jane*.

M. CHAMBERLAIN.

The question has been asked as to tariff rates on gladiolus bulbs from foreign countries. As we understand it, the rate is nominal being only 50 cents per 1000 on bulbs, roots, corms, tubers, etc. which are cultivated for their flowers or foliage. Section 215 of the new tariff bill also provides that all mature, mother bulbs imported exclusively for propagating purposes shall be admitted duty free. We understand that this is the same rate that was in effect before the recent tariff changes.

European Horticulture.

[From the American Florist.]

New French Gladioli.—The French National Horticultural Society has awarded certificates to the following four novelties: Gladiolus Gandavensis Le Titan, fine spike of very large blooms, of a coppery salmon, suffused with a darker shade and striped purple. The plant, which is ornamental in habit, often reaches a height of nearly seven feet, and is considered by the originator, M. Jules Ragot, as the starting point of a new race of extreme vigor. This grower also showed Gladiolus Mlle. Alice Martin, a Gandavensis with fine spikes, having seven to nine blooms open at the same time; these blooms are very large, round, rosy white striped mauve. The plant reaches a height of five feet to six feet. G. Gandavensis Mlle. Rameau, shown by M. Rameau, of Chevilly, Seine, has delicate pink blooms with wavy petals. The spikes, reaching a length of nearly two feet, have many blooms open at the same time, which appear to be very lasting. G. Lutetia, shown by Vilmorin-Andrieux & Co., is a Gandavensis with blooms five inches long, and wide petals of a delicate salmon color, slightly mottled with a darker shade, with some red stripes at the back of the throat, and one of the lower petals somewhat yellowish in the center.—*Journal of Horticulture*.

New Gladiolus Vitriacensis.—A cross between Gladiolus Lemoinei and several varieties of dwarf early hybrid Gladiolus. It is intermediate in character between the two varieties, blooming the end of June and in July. The plant is very vigorous, three feet high; the flower-stalk is graceful, the flowers rather distant and detached from the spike; they are of medium size, brick red in color, the lower petals having the blotches which characterize the dwarf early hybrids. These blotches are a deep carmine, divided by a yellow median line. Cayeux & Le Clerc of Vitry received a certificate of merit for this plant.

Chamberlain & Gage are now well settled in their new quarters at Wellesley, Mass. Their new bulb storage house is an especially fine one and contains some modern improvements which are worthy of consideration by those who are building. We hope to give a description of this plant in a future issue.

Most European Growers admit regretfully the very apparent bad health of the white variety *Europa*.

Trans-Atlantic Cable Letters.

One of our advertisers, C. Keur & Sons, Hillegom, Holland has sent us some information with reference to cabling which may prove useful to importers of bulbs. We are giving same below in condensed form as space does not permit giving it entire.

Must be prefixed CLP (written immediately before the address) if to be mailed from London to Hillegom, or CLT if to be wired to Hillegom. These prefixes count as one word and will be included in the minimum number of words charged for (13).

Must be written in plain language of country of origin or destination.

The use of more than one language in same message is not permitted.

Code addresses may be employed.

Each word of 15 letters or less is counted as one word. Ch counts as one letter.

Figures when not used as cipher are counted each group of 5 or less as a word.

Cable Letters which are to be posted at London, usually reach us 24 hours later.

They may be mailed to Central Cable office New York, or to the Boston office, for transmission, in which case they take the New York or Boston rates, but their delivery will be proportionately delayed.

Cable Letters are subject to a minimum charge for 12 words (13 including the prefix which is not charged for) as per table.

A reply to a Cable Letter may be prepaid but the instruction must be expressed in terms of full rates. For example: If the sender of a Cable Letter wishes to prepay a Cable Letter reply of 12 words at the 75c. rate, the instructions to be written before the name and address should be RP3 or whatever number of words at the full cable rate may equal the amount deposited. The indication RP including the number of words paid for at full rates should be counted and charged for as one word.

For wiring quantities, following words can be used.

Aab	100	Clare	5000
Adam	250	Diana	6000
Agnes	500	Fanny	8000
Alfred	1000	Jenny	10,000
Attie	2000	Mary	20,000
Asia	2500	Martha	50,000
Blanche	3000	Turkey	100,000
Charles	4000		

	RATES FOR TRANSATLANTIC CABLE LETTERS OF 13 WORDS INCLUDING PREFIX		To London Gr. Britain		To Hillegom Holland	
	Initial 13 Words	Excess Words	Initial 13 Words	Excess Words	Initial 13 Words	Excess Words
California	1.50	5c	1.99	7c		
Colorado	1.50	5c	1.74	7c		
Connecticut	1.00	5c	1.24	7c		
Illinois	1.25	5c	1.49	7c		
Indiana	1.25	5c	1.49	7c		
Iowa	1.35	5c	1.59	7c		
Massachusetts, Boston ..	.75	5c	.99	7c		
Massachusetts, other offices	1.00	5c	1.24	7c		
Michigan	1.25	5c	1.49	7c		
Minnesota	1.35	5c	1.59	7c		
New York, New York City	.75	5c	.99	7c		
New York, other offices ..	1.05	5c	1.29	7c		
Ohio	1.15	5c	1.39	7c		
Pennsylvania	1.05	5c	1.29	7c		

For mail delivery from London to Hillegom take the London rates.

A Gladiolus Problem.

[From *Horticulture*, Boston.]

One of the best known Gladiolus specialists in this country has told us that his firm had now decided to discontinue the growing of standard varieties in large quantities, because of the serious slashing of prices by the Hollanders. He asserts that "there is more money in raising potatoes now than such Gladiolus varieties as *America*, *Mrs. Francis King*, etc." So far as our observation goes the stocks sent out by the Hollanders are much inferior to the American bulbs. Of course, the people who are importing them will find this out by experience and after a time we may hope to see those things adjust themselves, but in the meantime it looks as if a great many American growers may have to quit the business. We believe some effort was made by the American Gladiolus growers to induce the tariff framers to give them some protection, but they did not accomplish anything. As to the imported bulbs the losses during transit amount to considerable, some varieties being worse than others in this respect. Then there are some that appear all right when received but afterwards either give up the ghost entirely or fail to flower. If the bulbs have sweated any in transit they are practically spoiled. So, we would advise, that if you must buy Holland stock it will be wise to insist on a guarantee of arrival in first-class condition. But the best course by far is to stick to the home-grown product.

Mr. E. S. Miller, of Wading River, Long Island, the well known Gladiolus grower, has returned from a two months trip to Oregon.

Disposal of the Allison W. Hunt Gladiolus Stock.

We are informed that the stock of fine Mixed and named Gladioli grown by the late Allison W. Hunt, of Warren, Ohio, whose death was recently noted in these columns, has been placed in the hands of Wilbur A. Christy, of Mapleshade Gladiolus Farm, for disposal. Mr. Christy was a close personal friend of Mr. Hunt and is devoting considerable labor to the task of preparing the bulbs for use, as their former owner was called away by death when this work was little more than begun.

Among these bulbs there is a considerable number of fine seedlings of one and two years' growth, which Mr. Christy will develop with the hope that among them there may appear some new sort worthy to bear the name and perpetuate the memory of its originator. The remainder of the stock, with the approval of the surviving relatives, will be used as a living testimonial to Mr. Hunt, following a plan devised by Mr. Christy, by which they will be distributed, free of charge, to the children and other residents of Mr. Hunt's home city and form a perpetual remembrance of one who loved flowers very dearly, and grew them all his life.

Burpee's Booklet.

W. Atlee Burpee & Co., Philadelphia, Pa. are issuing a booklet entitled "Food Value of Fresh Vegetables." This little booklet is really an educational work and worthy of the consideration of everyone, as it treats on the value of a vegetarian diet. The booklet is illustrated with attractive sketches and is very readable. Send for it.

American Gladiolus Society.

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Vice-President.....	George Woodruff, Independence, Iowa.
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THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.

Published Monthly by Madison Cooper, Calcium, New York.

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GLADIOLUS—"MAY"

A grand variety of the Gandavensis type, grown from seed by M. Crawford about twenty-five years ago. It is a strong grower and multiplies rapidly, both by bulbs and bulblets. Large bulbs send up from two to four spikes each and make a corresponding number of new bulbs. Each spike has from two, to four branches. The stalk is sturdy and stands up straight.

The flower spike is rather long, with two rows of blooms close together, and a goodly number out at one time. The color is white with pink shadings which show most near the ends of the petals. The two lower petals are marked with a fine brown penciling in the throat. In mass the flowers present a delicate pink appearance, almost white in a damp, cool season, and showing more color when the weather is hot and dry.

The *May* was introduced in 1891 by M. Crawford, who predicted at that time that it would be a favorite with florists, and his prediction has come to pass.

American Gladiolus Society.

EXPERIMENTS WITH GLADIOLUS.

[Address by Alfred C. Hottes, in charge of trial grounds, American Gladiolus Society, before the New York State Federation of Floral Clubs, Ithaca, N. Y., February 11, 1914.]

The New York State College of Agriculture at Cornell University has for many years been the trial grounds for a number of groups of flowering plants, viz., chrysanthemums, dahlias, tulips, asters, phlox, hollyhocks, sweet peas, peonies, annuals, and three years ago after the organization of the American Gladiolus Society, it was thought necessary to have a common neutral ground for growing new seedlings and varieties of Gladioli about which there was some question of authenticity. It is thus the duty of the trials primarily to determine the distinction of a variety rather than its particular merits or demerits. With this idea in mind Mr. Burt under the direction of Professors Craig and Beal and the speaker, under the supervision of Professor Beal, have described approximately 700 varieties of Gladioli. A descriptive card has been devised which we feel covers most of the points to be noted in regard to a variety. The card below is the one used.

It is a difficult matter to judge a variety to suit all persons concerned.

For example, the bloom of a variety will be small, of poor shape and of an objectionable color in our mind, but referring to the catalogue of the introducer we find that the qualities for which it is most commended are the very ones to which we took exception. Besides there is a varying idea as to just what characters go to make up an ideal commercial or landscape variety. We have had little opportunity to test the comparative keeping qualities of blooms, conditions vary so much during the blooming time. Nevertheless, careful notes have been kept showing the ratio of the number of flowers to the number of days a variety has been in bloom. In our work we have written about 250 letters to Gladiolus men both here and abroad asking them questions upon their practice of growing and hybridizing varieties. The department wishes to thank those who have so heartily responded.

Most of us have looked into the evolution of the garden Gladiolus and remember that it is an extremely complex hybrid. The varieties cultivated previous to 1841 were of the *Gladiolus nanus* type. Prominent among these was *Gladiolus Colvillei* and its white form, *The Bride*. But about this date Beddinghaus, a gardener upon the es-

CORNELL VARIETY TEST OF GLADIOLI.

No.

NAME.....OLD NOS.

SYNONYMS.....

ORIGINATOR.....DATE INTRO.....DONATED BY.....

SPECIES.....OBSERVER.....DATE.....

SIZE—Very large-large-medium-small.

BLOOM—Color.....marking }
 SEGMENTS—Equal-unequal; connivent-separate }
 UPPER—Horizontal-Hooded-reflexed; Broad-narrow; LOWER-straight-reflex; Broad-narrow.
 STAMENS—Color of filament;.....of style;.....
 TUBE—Straight-curved-slender-stout-long-short-compact-loose.
 SPIKE—Tall-medium-short; Erect-curved-drooping; Free-fair-bloomer-no bloom. No. blooms.....
 Branched?.....

REMARKS ON BLOOM—Compact, loose-Keeping quality....., Substance.....

HABIT OF PLANT—Erect-drooping; Tall-medium-dwarf. Height of plant.....
 Spreading-compact.

GROWTH—Good-medium-poor. TIME—Early-mid-season-late.

PROLIFICACY—No. CORMELS—Large-small. SIZE—Large-small.

FOLIAGE—Well furnished-medium-poor; Broad-medium-narrow; Veins prominent-obscure.

COMMERCIAL VALUE—CUT FLOWER—Extra good-good-medium-poor.
 LANDSCAPE—Extra good-good-medium-poor.

VALUE AS A WHOLE—Extra good-good-medium-poor.

REMARKS:

ÆSTIVATION

No. Corms sent No. that Grew.. No. Bloomed.....

CORNELL UNIVERSITY GLADIOLUS TEST CARD.

tate of the Duc d'Arenburg, crossed a number of *African* species and obtained a hybrid species known to this day as *G. gandavensis*. There has been a continual discussion since that date to determine accurately its parentage, the best authorities finally believing it to be a cross between *G. psittacinus*, a brightly colored species and *G. oppositiflorus*, one in which the flowers are borne opposite each other and much more profusely than the first species. *Gandavensis* was sold to Van Houtte, who introduced it. Souchet, the court gardener to Napoleon III, admired this, and after much hybridization not only with the various *gandavensis* varieties but also with some of the closer related species, he started the development of our modern Gladiolus. Lemoine of Nancy, France, felt that the genus needed further hybridization and used *gandavensis* crossed with *G. purpureo oratus*, a species greenish-yellow in color with somewhat hooded or bell-shaped flowers bearing a conspicuous maroon blotch. This hybrid species, though partially hardy and possessing some of the deepest and most velvety colors "in the vegetable kingdom," lacks size, is often not open enough, and is unable to allow all its blooms to expand when placed in water. This species was called *Lemoinei*. A few years later Lemoine crossed some of his *Lemoinei* varieties with *G. Saundersii*, a wide-open scarlet species with a white, spotted throat, and attained the group since called *G. nancianus* in which the flowers are larger and wider open, at the same time possessing the wonderful colors of *Lemoinei*.

About this time Leichtlin of Baden Baden, Germany, was working with Gladioli and crossed *G. gandavensis* with *G. Saundersii*, attaining the giant-flowering class, the *Leichtlinii*. The stock was sold to Mr. Hallock of Long Island, and in 1892, after improvement, was sold to John Lewis Childs, who changed its name to *Childsii*. It was only a few years ago that A. E. Kunderd originated his ruffled strain, attained by a gradual selection of those blooms showing a ruffled tendency. Recently a new species, *Gladiolus primulinus*, has been introduced into hybridization. It is of great value in that it is a good yellow which in this case seems to tone down some of the deeper and more lurid colors, to the daintiest ecrus, oranges and salmon pinks. This talk should not be

closed without mentioning the contribution of a man who has worked untiringly for the improvement of the Gladiolus, H. H. Groff of Simcoe, Ontario. We find that Mr. Groff has attained crosses, which when sent out in mixed lots consisted of many seedlings subsequently named by various growers. More varieties have been named from the various Groff hybrids than any other seedlings, under contention, upon our grounds.

It is a problem to regulate the naming of varieties. It is a necessity that originators of new varieties before naming them, find out definitely whether the particular variety has been previously named or whether the name has been previously used by another. This must be left to the existing nomenclature committee, which should consist of neutral individuals. It is further necessary that if we are to do our work effectively we should have the more prominent commercial varieties upon our grounds for comparison.

More than 150 photographs were made during the summer of the most promising subjects. In our photography we use the orthochromatic plates in a 5 x 7 camera. At first the pictures were taken in a barn, but the negatives did not come out sharply, due to an imperceptible breeze. We then thought it necessary to cut the spikes and carry them to the college building a mile away and there photograph them. The light, in this case, comes from the south only. This is overcome by the use of a mirror or cheesecloth screen which removes the shadow. We use a dark background for the lighter colors and a nearby white ground for the darker colors. It seems difficult to make good prints of pink varieties. They appear darker. The darker varieties, such as *George Paul*, show almost no detail of their markings. We use the 64 or 128 stop, as the smaller stop gives the greater detail.

Each variety sent us for trial is stored carefully until planting, which is not advisable with us until the middle or last of May. We plant about five or six inches deep. As our soil is a clay loam upper planting seems impractical. With this depth of planting, or deeper in a lighter soil, staking is unnecessary besides allowing the roots to be in a cooler and moister soil. In order to have each plant given the best opportunity for growth, they are planted seven inches apart in the row with the rows three feet and six inches apart. Numbered stakes mark each variety. Careful cultivation is carried on during growth. We use no fertilizer except a liberal manuring the previous

autumn. However, besides manure, which must be thoroughly incorporated in the soil, certain chemical fertilizers are valuable. Any good potato phosphate will be ideal for the growth of Gladiolus corms. Good ground bone is excellent, applied either in the furrow or on top of the row. This may be applied at planting or subsequently, perhaps three times during the growing season.

We dig our Gladioli when the frosts have touched them slightly. To avoid danger of mixing the sorts and as we are usually expecting rain or continued frosts, they are not left upon the soil to dry, but are slightly cleaned and placed in ten-pound sacks. The tops are loosely tied that air may enter and rotting be avoided. When it is determined that the tops are thoroughly dry they are removed and the corms stored in a rather cool cellar. The cormels are kept with the corms, since we have so many kinds. The soil on the old corm, in a measure, keeps the cormel from drying.

The cormels, however, do become dry and the outer coating becomes very hard. We have, therefore, found it wise to soak them about 12 to 24 hours before sowing. If there are but a small number and they are valuable, it seems worth while to split open the cover. When planting cormels or seed it seems quite necessary, until germination, to cover the soil with burlap or glass to retain the moisture. Many seedlings did not grow last year because of failure to do this. Let me end this paper by thanking each grower for his hearty coöperation with us in our trials and say that we are willing to undertake the investigation of any Gladiolus question within our power of solution, providing we have the continued support of the Gladiolus growers.

The Gladiolus Pre-eminent.

I have been saying a good deal of late about the Gladiolus, perhaps so much so as to be tiresome to some of our readers who may not be especially interested in this class of flowers; but I believe that if it were more fully known that the Gladiolus is as easy to grow as the potato and can be handled through the winter in almost the same way, it would at once leap into a position that is far beyond what it presently enjoys. The dahlia is more brilliant in flower, but does not last as long, is very particular about its care through the winter and ordinarily lacks the long stem that makes the Gladiolus so particularly useful as a cut flower. The tulip is earlier and fills such a partic-

ular place of its own that it is hardly to be compared with the Gladiolus. There are many other favorites that could be mentioned, but I believe there is no flower that has such a combination of ease of culture, brilliance of flower, durability in the house, and long period of bloom as the Gladiolus. I see no reason why every family might not as well enjoy it as the potato.—CLARENCE WEDGE in *The Farmer*.



GLADIOLUS "AMERICA."

For description see front cover page January issue.

Deep planting is now strongly advocated, but it must be remembered in this connection that deep planting means very deep spading or plowing. The ground must be worked at least two inches below the bulb to allow of suitable root growth and access of fertility.

MRS. AUSTIN'S TALKS FOR AMATEURS.

NO. 3. PREPARATION OF SOIL AND PLANTING.

Full of the enthusiasm of spring we hasten to our work of preparing the soil for Gladiolus planting. Pausing an instant we glance over the valley below and into the distance beyond, and forgetting our work, are spellbound by the beauty of the April scene before us. A wondrous sight with its various shadings. The deep green of the nearby grain and meadow lands, the bursting buds of the forest trees, an occasional one dressed in the white glory of bloom, glinting with gold in the sunlight, and all blending with the iris blue of the horizon.

A world of teeming life is ours, and the thought comes to us that we are not alone, but surrounded by an army of mute co-workers, eager to assist us in our efforts to contribute our mite to the beauty and harmony of life. Inspired, we turn to our plan of the day.

At no other time in Gladiolus growing should we do our work more carefully and thoughtfully if we wish for best results, but here again the Gladiolus shows its superiority, for with few exceptions there is no flower that will grow in any kind of soil carelessly prepared, with no cultivation to speak of and show such a wealth of bloom and beauty, and with it a gentle reproach for the grower. Perhaps this occurred last year with some of us and we resolved to try growing them another year under really ideal conditions.

With that thought in mind, last fall we plowed under a good clover sod, gave it a heavy coating of manure, worked it well in and then seeded it to rye, which, at this time, is full of sap and when turned down is another form of valuable manure. If the soil requires it we will give it an application of lime. Harrow and roll and harrow again, and work this soil as fine as ashes, mark out the rows and sprinkle fertilizers, if needed, in them covering lightly with soil, and we have an ideal condition. The fertilizer may be any kind that is good for potatoes. Someone says, and we suspect it is the amateur with the small plot, "We cannot have that ideal condition, we cannot do all these things." Do not think of giving up, if that plot is now in sod and is too small for horse work, it may be covered with manure, or perhaps was according to our instructions last month, and spaded up, chopped with a hoe and raked fine.

Then, if further enrichment is needed, sprinkle it with commercial fertilizers.

It is well to always plan ahead anyway and in the fall harvesting of vegetables, flower roots or bulbs we should not consider the work complete until the ground is left in proper condition for the winter. Smooth down the rough places, rake it over, and sow to rye. It can be done in a surprisingly short time. We suppose this was done by many and we little realized the pleasure we were storing for ourselves in the winter glimpses of the dark green carpeting of the otherwise barren plot. A feast to the eye and a constant promise of better things in store for us. In springtime its gentle waving in the breeze seems to beckon us to untiring effort, for rye wastes not a sun ray in nature's training school of self improvement. All this about rye! Why should we not see the pleasing as well as the practical value even of rye? We should do our work with eyes wide open for the beautiful things in our every day life.

EARLY PLANTINGS.

The soil is mellow and moist and hard-shell bulblets being somewhat slower in growth, we decide to plant them first so they will get a good early growth and may be dug before the regular harvesting of the main crop in the fall.

If we have a large quantity and plenty of room we will make the rows thirty inches apart to admit of horse cultivation. The drills should be three to four inches deep for bulblets and four to six for the larger bulbs according to size, and if the soil is sandy; about one-half as deep if soil is clay. Sow bulblets thickly. They will come up quicker, grow better and have fewer weeds among them.

Bulbs less than one inch in diameter may also be sown, giving them plenty of room in the row, but larger sizes should be set and a fairly good rule is to allow a space between them of twice the diameter of the bulb.

Some growers plant in double rows which is also a good plan. When the bulbs are in the rows, cover with cultivator and ridge up like potato planting.

If space is limited and bulbs are to be cultivated by hand, the rows should be fifteen inches apart or set five to eight inches apart in a solid bed; the distance apart to be according to size of the bulb.

Mark each variety carefully with the field markers described in the March issue.

For a continuation of bloom we will save some of the bulbs for later planting.

THE VARIETY TEST CARD.

The variety test card printed in our March article should have been accredited to the department of Floriculture in Cornell University as it was originated and is used by them in their trial ground work.

In the preparation of this Gladiolus test blank, Prof. A. C. Beal and Mr. A. C. Hottes have assisted Gladiolus growers to make scientific tests. It is a wise plan for growers to use these cards in their home trials and later send the tested varieties to Cornell for further proof of their value and registration before introducing them. MRS. A. H. AUSTIN.

Growing Gladioli from Seed.

BY FRANK S. MORTON.

Growing Gladioli from seed is not a difficult operation if a few ordinary precautions are taken. One must begin with good seed of course and a good plan to make sure one has good seed, is to rub off the surrounding wing or parachute that nature has provided in order that the seed may be widely disseminated by the wind. To do this a simple way is to take an ordinary gauze cooking strainer and rub the seed over it. The wings will go through in small particles and the good round seed will then be easily separated. It will be found that very often what appears to be good seed is made up of a large proportion of flat, flabby and unfertile particles. In a package bought this season I found only six good seed although in opening the paper it appeared as though there was a goodly lot. In sowing pick out a good spot with good rich earth and plenty of sunshine. Sow thickly and cover from one to two inches, pressing down the soil hard. Then cover with an old piece of burlap and keep covered until the little sprouts show thickly above ground. Pin down the burlap so it won't blow away and allow the ground to dry out. Remember that it seems to be a peculiarity of Gladiolus seed and bulblets that they like to rub elbows pretty close to each other and seem to do better with thick sowing. The burlap will certainly cause the seed to germinate as it keeps the ground moist. After the shoots are well up remove the burlap and keep the plants well watered. Don't let them dry out. If the weather is dry wet down once a day and keep the ground well stirred around them. This simple process will supply one at the end of the season with a good proportion of small bulbs to seed sown. No matter how small the bulb, save it to plant the next year.

Notes and Comments.

We will begin planting bulblets as soon as possible after the first of April.

Those who win the prizes offered by B. F. White as mentioned on page 38 of the March number, will be fortunate. Twenty-two of Mr. White's varieties bloomed in our test plot last season and not a poor one in the bunch. *King Philip* is indeed royal.

Gladiolus bulbs will lose much of their vitality and become shriveled if stored in a very warm place. We sometimes receive bulbs in this condition and think they are benefited by soaking a few hours before planting them.

Now is the proper time to treat the bulblets of all varieties, mixtures and seedlings that are not extra good if we wish to raise the standard of quality in the bulbs that we grow this season. The treatment I have in mind consists in carefully putting them all in paper bags and placing them on the center of the coals in the furnace. After a few hours of this treatment the poor quality will be eradicated. The only value they possessed will be found in the ashes which may be sowed on the ground to improve the color and vigor of the flowers.

G. D. BLACK.

American wholesale growers have been greatly worried because the Holland growers have been quoting low prices and selling rather large quantities of stock, and wholesale buyers are almost afraid to buy for fear that prices will go lower. It seems that the better posted American growers are inclined to believe, however, that as the planting season approaches, the market will acquire greater stability and better business will result. Those who are in close touch with the situation feel that there will probably be no great surplus of any variety except possibly *America* or *Mrs. Francis King*.

Some seasons the common aster beetle is quite destructive to the Gladiolus during the blooming period. It destroys not only the petals of the flower itself, but will attack the unopened buds. If asters are grown largely near the Gladioli, the beetle has been a serious pest in some cases. Paris green is used as a poison, a teaspoonful of the green being used to a gallon and a half of water, and applied with a very fine sprinkling can or bulb sprayer.

Growing Gladioli Under Irrigation in Colorado.

BY W. W. WILMORE, JR.

COLORADO was one of the first states to employ irrigation by gravity, although this system of irrigation is perhaps the oldest known system in the world.

The Spaniards farmed and irrigated lands in New Mexico four hundred years ago by the gravity system, and their ditches still remain in some localities as proof, the age of same being apparent by the deposits of sediment in their bottoms. The Egyptians irrigated in this same

waters to many different parts of the state.

For irrigation the streams are tapped by canals, which carry water into adjoining sections. The canals are tapped at intervals by sub-canals, and these in turn spread out into laterals which distribute the water directly to the fields or into reservoirs which are generally located on the highest point of the farms in order that the water may have a natural flow to all parts of the premises. It is sometimes



A field of *Augusta* growing under irrigation on Mr. Wilmore's place in Colorado.

fashion in localities where the Nile did not afford them favors, sometimes raising the water from wells by means of water wheels turned by oxen on tread mills. However ancient the system may be, it is still in use and will continue as long as the mountains are higher than the sea or until all patrons of husbandry have passed into future realms of rest and I dare say it will continue to be the most satisfactory method of irrigation known to mankind.

Colorado has an advantage over many states for two reasons: First; it is blessed by the mighty chain of the Rockies, whose ravines and crevices catch the heavy snows and store them for transformation by the warm summer's sun. Second; its many diverging streams distribute its

necessary to build dikes or flumes to convey the water to these points, and in cases of long distance the water is piped in ordinary sewer pipe which is carefully cemented.

In preparing a plot of land, care is taken to reduce all high points and fill all hollows, giving the area an even slope or a flat surface to enable the water to flow gently from one side to the other.

In planting Gladioli, the ground is plowed to a depth of ten inches. It is then thoroughly harrowed. It is then marked out for the rows which are two and one half or three feet apart for large corms. Trenches are made by means of a shovel plow, making a trench nearly one foot deep. The bottom is leveled with a hoe. The corms are then placed in by hand,

right side up, two inches apart, four corms abreast in the row, making the rows about eight inches wide. In covering, the hoe is sometimes employed but generally this work is done by a horse with turn-shovel cultivators which fill the trenches somewhat fuller than necessary. This surplus is then raked down with a garden rake which leaves the row with a smooth level surface.

Small corms and cormels are treated much the same except that they are sown in smooth bottom trenches like peas, and are then covered only about four inches below the surface, whereas the large corms range from five to six inches below the surface. The distance between the rows is only wide enough to allow a horse to pass through. They are planted very thickly according to sizes from one hundred to three hundred per foot, cormels being planted the thickest. As soon as they make an appearance above ground they are thoroughly cultivated with harrow and tooth cultivators, and if weeds are also peeping through, the tops of the rows are again raked.

Cultivation is continued periodically until it becomes somewhat dry, then the shovel cultivators are used to hill up along the rows and make ditches for the water. Small corms are ditched by hand, using wheel-shovels or markers as the horse shovel-cultivators are apt to cover the tender blades. A moderate wetting is allowed and cultivation is again continued as soon as the soil is in condition to work, and this is very important. If soil is disturbed before dry enough to break or mellow up, it is thrown to the surface and baked into clods, which are not easily dissolved. The ground thus loses its porous, light condition and many hours of labor will be necessary to bring it back in proper shape. If the ditches are allowed to dry and bake after irrigating we have the same condition.

Fertilizers are used only when necessary and only then in moderate quantities. Well rotted stable manure is sometimes applied before plowing, but as a rule commercial fertilizers are the better. They are applied when plants are about ten inches high, and can then be well cultivated in, and do not come in direct contact with the corm or main roots which is very injurious. As a top dressing I prefer pulverized sheep manure as it gives very quick results and is cheaper than many other fertilizers. Bone meal is also good.

At the blooming season cultivation ceases, so well defined ditches may be made to carry water for the balance of

the season. At the lower extremities of the rows, waste ditches are made to catch and carry off the surplus water as it passes out at the end of the rows. The waste is conveyed by this means to other plots of land or in some cases to the main lateral where it is again used.

Irrigation water is measured by inches and feet. One inch of water is that amount which will continually flow through a hole one inch square under a five inch water pressure. Ten inches of water is generally allotted to a ten acre tract of land or an approximate number of inches to each acre in a tract of larger or smaller proportions.

In extremely dry seasons irrigation is carried on by means of pumping from wells. These wells vary in size according to the amount of water needed. One of the best I have yet seen is on our farm at Wheat Ridge. It is made of boiler iron in four sections, each section being four and one half feet long and six feet in circumference, making the well eighteen feet deep. At the location of this well the water level is only six feet below the surface which gives a standing body of water twelve feet deep. When pumping, the engine throws a stream of nearly ten inches (irrigation measure) which continues almost two hours as the water runs in nearly as fast as the pump can take it out. Three pumpings can easily be made per day. For convenience wells are much more satisfactory but are more costly to operate.

The advantage of irrigation over dry lands is that, continued growth can be kept up until plants are matured, which adds strength and vigor to them as well as health. Whereas if they become well started by early summer rains and are checked by the heat and drought of July and August, the only resource left is to draw on the nourishment already stored up for next season. This makes weakly, half grown corms which are susceptible to disease and hard to keep over winter, besides having only half the flower stock or spike the next season that should appear.

Mr. Carl Schmid, the able horticulturist and proprietor of the firm of Hage and Schmid, Erfurt, Germany, maintains that many of his customers prefer the *Gandavensis* types to the *Giants*.

Don't forget the value of a complete volume of THE MODERN GLADIOLUS GROWER. Index will be furnished on request at the end of the year.

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Growers are invited to contribute articles or notes over their own signatures, but the Editor reserves the right to reject anything which in his judgment is not conducive to the general welfare of the business.

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Vol. I.

April, 1914

No. 4

Bulbs by Parcel Post.

In the February issue of THE MODERN GLADIOLUS GROWER it was suggested in a little editorial entitled "Bulbs by Parcel Post" that Gladiolus growers should do a little missionary work with their Congressmen along this line. We are hardly conceited enough to think this suggestion has borne fruit, but under date of March 14th, the following Washington item has been printed:

"Extension of the parcel post rates to seeds, cuttings, bulbs, roots, scions and various kinds of plants became effective today as the result of an order issued by Postmaster General Burleson. The order puts into effect the recent act of congress which repeals the special rate of postage heretofore chargeable on seeds, plants, etc., and makes the regular parcel post rates of postage applicable to parcels of such articles.

"Under the law just enacted parcels of seeds, cuttings, etc., weighing four ounces or less, are subject to postage at the flat rate of 1 cent for each ounce or fraction thereof, regardless of distance. On parcels exceeding four ounces in weight the pound rates applicable to the respective zone apply.

"Copies of the order, together with the necessary instructions, were being sent out by the Postoffice department to-day."

It is interesting to note in this connection that on small packages the new classification does not work out altogether economically for Gladiolus growers. For

instance, packages of one pound going to various parts of the United States will cost as much, or possibly more, on the average.

One of our San Francisco subscribers suggests that we advise our readers to go to the Exhibition in 1915. The Panama-Pacific Exposition will be so largely advertised that it is probably hardly worth while for us to call attention to same. Lovers of flowers will find in California a floral feast that cannot be had elsewhere, and those who are fortunate enough to be able to make the trip to the Exposition will certainly find themselves well repaid in the display of flowers and outdoor horticultural exhibits which they will see.

Strange as it may seem, it is reported that some of the best varieties, like *Mrs. Francis King* and *Isabel*, were not appreciated at their real value when first produced. It would seem that some hybridizers are producing so many new varieties each year that they cannot possibly give suitable attention to each one to judge of its good qualities. It might be suggested that those who have varieties which they believe are an advance in breeding should not be in a hurry to dispose of them, but rather should build up the stocks, and bloom them under the very highest conditions to show the limit of their possibility.

[Written expressly for *The Modern Gladiolus Grower*.]

Gladioli and Ferns.

A PLEA FOR ARTISTRY AND HARMONY IN
THE USE OF THE GLADIOLUS AS
A CUT FLOWER.

BY W. M. MCNEELY.

Some days ago I wrote a friend in Columbia that we had formed a Horticultural Society in this little town, and in replying he confessed that he was so busy with Frat. dinners, etc. that he had not time to find out exactly what a Horticultural Society was, but he supposed its object was the Prevention of Cruelty to Flowers. Now, perhaps this boy was just "taking a rise" out of me or perhaps he had visited an exhibition of cut flowers and the atrocities displayed there were still rankling in his mind. Anyhow, he wrote better than he knew and certainly one of the chief aims of Horticultural Societies in general should be the promotion of harmony in house and garden decoration and the elimination of monotony and barbarity in floral displays. Estimable ladies will yell for the police if they see a passing crate overcrowded with hens, and then they will go home and complacently jam a bunch of sweet peas into a vase already filled with asters.

Have you never met such?

For either house or garden, few flowers have the fine decorative qualities of the modern Gladioli; and the colors are so delicately beautiful or so vividly brilliant, that combinations for every color scheme are now available at a nominal expense. The popularity of this magnificent flower is rapidly increasing, and it is a matter of congratulation to lovers of the beautiful that the Gladioli Breakfast will soon supercede the Tango Tea. Could anything be more refreshingly inspiring than the *al fresco* breakfast by a border of dewy Gladioli glistening in the morning sun? Gladioli to right of us; Gladioli to left of us; Gladioli in front of us, in the shape of a huge bowl of *America* interspersed with a few spears of their own foliage and resting on delicate fronds of wild wood ferns; the beauty of the ferns enhanced by white satin crepe paper fluffily drawn around the top of the bowl with cattleya pink embracing the bottom in graceful folds, and voila! you have an artist's dream!

Have you a little country place? Plant Gladioli and invite your friends to breakfast. But plant ferns too, for ferns and Gladioli form an *entente cordiale* that is

most charming. If you live far from the woods, devote a shady corner of your garden to *aspidium aculeatum*, *cristatum*, *asplenium angustifolium* or any other of the numerous wild varieties.

Decorate the living room of your bungalow with Gladioli. Fill the fireplace with masses of scarlet—but do not crowd them. If you lack foliage, the wild iris or blue flag will lend you some—very similar to the spear blades of the Gladiolus.

Give each particularly beautiful specimen a tall clear glass vase to itself with a single fern and a spear of foliage. Hang one-handed vases on the wall either side of the window or other suitable place with a single spike of flowers and a couple of ferns. The weight of the flower spike will cause the vase to assume a graceful angle. Do not clash your colors. When in doubt give each color a separate setting, and do not forget that one perfect flower properly displayed may have a more pleasing effect than a whole garden full massed without regard to the "feelings" of the flowers or their environments.

Gladiolus Bulbs Rotting.

There is something the matter with our Gladioli. Nearly all from which spikes were cut show a rotting of the center of the stalk, in many extending to the bulb in which all of the stalk is dead. An examination of the bulb shows that it has not made any growth since the spike was cut, neither have they made any bulblets. The eye from which next year's stalk should grow is dead; otherwise the bulbs appear perfectly sound. In many cases two side eyes have formed and appear healthy. The fields of all other growers in this vicinity are in the same condition, some of them worse than ours. Stalks from which spikes were not cut do not show any imperfection. Will these bulbs grow and produce spikes next season? We want to know what ails them, and if there is any remedy or preventative.—W. & H., N. J.

Answer:—

It is evident that the Gladiolus spikes were cut with too much foliage or too near the bulbs, which has caused them to decay in the center. It is never advisable to cut away all of the foliage if the bulb is to be saved for another season, but much better to leave three or four leaves. It is possible the bulbs will produce spikes next season, but they very likely will be weak.

I. S. HENDRICKSON in *Florists' Exchange*.

WAYSIDE RAMBLINGS.

SUGGESTIONS AND THE AMERICAN GLADIOLUS SOCIETY.

EDITOR OF THE MODERN GLADIOLUS GROWER:—

The March number of the MODERN GLADIOUS GROWER is at hand and is very interesting, and I wish to compliment you on the amount of material you are securing for your magazine.

I am particularly interested in the article by Mr. White, and I agree with him that it would be a splendid thing if the American Gladiolus Society could in some way interest amateurs more than it has done in the past, and while it is easy to make this wish, I know from experience that it is an entirely different matter when it comes to producing results. The criticism has been made and justly so from the beginning of the Society that the affairs were run too much by Commercial men, but as a matter of fact, who else would go to the expense of attending the Conventions and doing the vast amount of work in connection with them that has to be done?

In the past I confess that I did not know of any Amateurs that would be willing to give up the time to carry on the work of the Gladiolus Society as it has been organized in the past, for we must remember that our By-Laws say we must meet with the Society of American Florists, and as everybody knows this society jumps from one part of the country to another each year, and outside of the secretaries of the society, the officers have paid their own expenses.

The amateurs have not been entirely neglected from the fact that several thousands of application blanks and circulars have been sent out through the catalogues of different seedsmen, and I think the records will bear me out when I say the response has been very small, and I think the records will also bear me out that the amateurs are the first ones to get tired of paying dues each year, and it is a continual effort to keep up the membership. Of course there are some amateurs whose enthusiasm lasts from year to year, but in this instance I am referring to the average person.

I heartily agree with Mr. White in regard to renaming varieties, but must take exception to what he says regarding the prize awarded to *Rochester White* for the reason that the prizes were offered for the best white variety exhibited, and there can be no question whatever as to

the prize being awarded correctly under the wording of the schedule, for *Rochester White* as exhibited at these conventions left nothing to be desired; the matter of its constitution for all sections of the country, and its being identical to *White Lady* is a different matter. As to what Mr. White says regarding the society being able to stand on its own feet, I am quite sure the books of the society will show that it is in a splendid financial condition, and has always paid its way out of the regular receipts, shows a good balance and has never had to beg anything from anybody; and the matter of being merged into any other society or organization is only in accordance with the spirit of the times which tends to affiliation, as many people feel that it is becoming burdensome to support so many different horticultural societies.

I have been very closely associated with the society since it has been organized, but I wish it to be understood that I have no bitterness in the above remarks, for while my efforts may not have been to the liking of everyone and I know my faults, I am sure that the rest of the officers of the society have done everything in their power to advance its interests, and I know of no case where anyone ever asked to be elected or appointed to an office or a committee and the services have been given voluntarily, and while the expense of the secretary has been paid it has not been commensurate with the service rendered.

Yours very truly, I. S. HENDRICKSON.

IS "EUROPA" UNHEALTHY?

Are we quite fair to this splendid flower when we pronounce it lacking in good health? How does it indicate this weakness?

True, it will not bloom in some gardens, and in others the blossoms are small and of inferior form—quite commonplace indeed and in no way resembling the grand spikes that have won for the variety its world-wide fame. And the bulbs that produce these ill-favored blossoms yield few and inferior bulblets. But does it follow as a matter of course that these symptoms indicate physical degeneracy?

Instead of being physical, may not these weaknesses be nearer to what would be called temperamental, if these subjects were human? May it not be that these bulbs are simply exacting in their demand for peculiar conditions, before they will do their best?

We know that this occurs in other plants,

and, indeed, it occurs in other Gladioli—*White Lady*, for example.

It is perhaps most marked in the Oncocyclis group of Irises; for these beautiful creatures,—among the most beautiful of all flowers,—positively refuse to bloom, and will display nothing but stunted and starved foliage unless the gardener will provide the precise conditions which they demand. Yet no one accuses these plants of lack of health.

And we know that in many places in this country the *Gladiolus Europa* grows to perfection, without so much as a hint of physical degeneracy. Mr. Havemeyer tells me that in his gardens on Long Island he has no trouble whatever in growing *Europa*.

So, gentlemen, we must look elsewhere for the cause of our failure.

M. CHAMBERLAIN.

"ROCHESTER WHITE" AND "WHITE LADY."

Mr. B. F. White on page 43 of the MODERN GLADIOLUS GROWER, date March 11th compares *Rochester White* and *White Lady* as identical. I wish to state that this is absolutely untrue. In comparing and testing these two varieties there is all the distinct difference as there should be. Take for an example the old variety *Daybreak Carnation* and compare same with the up-to-date *Enchantress*. The distinct merits of *Rochester White* are marked in the vitality of the growth, increase and size and substance of the flower.

It is plainly evident that Mr. White did not properly test *Rochester White*, and further had he visited the field when in bloom or at any time even to inspect the bulbs, stock from corms up, he surely would not have made his statements.

Rochester White was sent to Cornell University's trial grounds, also to some of the most reliable Growers for trial or test purpose. Same were also properly exhibited for comparative tests in six different exhibits of the States, where if it were identical to the variety *White Lady*, it would surely have met opposition by some of the competitors.

Rochester White competed for prizes and received awards on seven different occasions during four years, being judged each time by different competent judges, and in the presence of some of the most trustworthy exhibitor Growers of this country. I further wish to add, that our honorable Society and Judges could not have acted differently in awarding the above merits.

JACOB THOMANN.

ACIDITY—LIMING

The writer has had equally good results seemingly, on acid ground and soil that is alkali, in other words containing lime. We plow in the autumn, and spring tooth the ground in the spring. Have turned under a piece of sod that is acid and shall lime part and leave remainder as it is, and then will have the satisfaction of nearly knowing where we are at on this question.

An easy way to test soil for lime is to use muriatic acid, commonly called tinner's acid. Pour a little on the soil here and there over the field and if it foams there is plenty of lime in the soil, and should no action take place, lime is absent and the ground acid.

JOE COLEMAN.

Growing Gladiolus Bulbs.

In south Georgia, "Will it pay to buy small bulbs of Gladioli to grow here for the increase?"

This is rather hard to answer, as I do not know how the Gladiolus will thrive in that section. It needs a sandy soil and will not thrive well on heavy clay. The bulbs or corms are most largely grown in New York and Ohio, and they do well on sandy soils all along the Atlantic coast as far south as North Carolina, but only an experiment can demonstrate whether they will thrive farther south. It is always better to grow them in distinct varieties rather than mixture, for some sorts make far more offsets than others and continual growing in mixture will result in running into one sort mainly. I grow all the different varieties and colors by name and keep them separate. Some of those that increase rapidly can be had for about \$20 a thousand, while others are worth as high as \$200 a thousand because of slow increase. I grow them for selling the cut flowers and incidentally for the increase in bulbs.—PROF. W. F. MASSEY in *Progressive Farmer*.

When growing Gladioli for cut flowers, there is no better place than the vegetable garden. Plant them one to three inches apart in the row, and with the rows only far enough apart to admit of cultivation. Bulbs should be four to five inches below the surface in a clay or heavy soil and five to six inches in a light or sandy soil. This deep planting supports the stalk and also gets the bulb down so that the roots are in moist earth. Even deeper planting than this is recommended by some.



QUERIES AND ANSWERS DEPARTMENT



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Staking Gladioli.

TO THE EDITOR:—

Is it necessary to stake Gladioli as is recommended by some? It seems to me that this is a trouble and expense which could not be practicable except for exhibition stock of those having but a few to attend to. C. N. L.

Answer:—"To stake, or not to stake, that is the question," which is certain to confront every Gladiolus grower, and usually at an early and unwelcome period in his experience. The corms have been selected after long and serious study of the catalogue's enticing pages, they have been planted with care, and every stage of their growth noted with anxious anticipation, and at last, the beautiful bloom is beginning to repay for all the toil, when the un-failing summer tempest comes, and the plot is, to all appearance, a mere mass of wreckage. Oh, the grief and the disappointment of it! But we've all been through this chapter, and naturally have instinctively thought of staking as the only refuge in time of storm.

Staking is indeed to some degree, of use, even as crutches are to a cripple. But would we encourage the production of congenital cripples on the ground that crutches are always to be had? Or would we not rather seek the growth of a sound, normal physical development that *needs no crutches*? If this does not make plain my feeling on this point, let me say that a score of years ago I registered a mental vow never, under any circumstances to devote much attention to any variety, no matter what its other attractions, that required staking in ordinary culture. The disadvantages of staking are many; it is exceedingly laborious and costly; it is not always successful; the plant often breaking at the tie, when it would really have been safer if left to sway before the breeze. The great objection to staking is that except on a very small scale it is impracticable, and the cost in outlay and labor would render impossible the production of cut spikes at a popular price.

If staking is felt to be necessary, a good

strong stake 2 inches in diameter and 5 or 6 feet long, firmly driven at intervals of six or eight feet in the center of the row, from which strong and good-sized cords may be passed on each side of the row, is as commendable a method as I know. If the rows run east and west, the plants will be a mutual support, and will suffer much less from storms than if they run north and south, as it is a well-known fact that our prevailing winds are from the west. BUT, *why not grow varieties that can stand alone?*

I use stakes, strange as it may seem, after the foregoing. I have a thousand stakes $\frac{1}{2}$ inch square, and five feet long that are in constant use during the growing season. When the flowers appear, the work of Pollenating begins, and the first step after a plant is selected for a seed parent is to stake it up very carefully, tying it with a large, soft string, sometimes in two places, and placing the stake carefully in such position that it will not be in the way of the later work. Pollenating by hand is much too laborious and important to take any chances on, and a spike accidentally dragged or broken down is of no value for seeding. Besides, the weight of the paper sack, usually the 16 to 20 pound size, which is tied over the spike to ensure isolation from undesired agencies that might interfere with the purity of the cross, must be supported in some way, or it would surely break the spike, especially when wet by dew or rain. The stake provides safety in all these ways, and this is the only reason, and the only way, in which I use or advise staking. Deep planting is helpful, but cannot be relied upon entirely, as when the ground is softened by a heavy rain it yields, and some weak sorts will break or twist off before the wind. Staking is for the sake of the plant rather than of the opened flowers, as a summer storm will destroy the appearance of all expanded blooms, even if they are staked. *Plant varieties that can stand without crutches.*

WILBUR A. CHRISTY.

Planting Gladiolus Bulblets.

TO THE EDITOR:—

For the planting of Gladiolus bulblets the following directions are suggested, and I would be glad to have your opinion as to whether this is the best way to handle it or not:

"Make a trench in good loam, fill it with water and let it stand about one hour until the water has soaked out. Then plant the bulblets and cover lightly with earth. Then lay an old piece of carpet over them and keep it damp at all times until the bulblets break through the ground, after which take the carpet off and give them the sun."

Please give as full directions as possible on when to plant to get best germination and also some directions for the care of the bulblets over winter.

S. A. M.

Answer:—I don't like to fill the trench with water as S. A. M. suggests, as it will have a tendency to pack the soil by water soaking the covering soil.

Keep cornlets damp (not wet) over winter and plant early. Keep soil over and at sides of the rows well cultivated. The cover soil should not be loosed too deep, as all loose soil will be dried out. A mulch of old carpets, strawy manure, etc. might be good in a small way, but would hardly be practical on a large scale. It would be better to water the rows by pouring water over the mulching than in the trenches before planting. We sometimes water by first digging a furrow near the rows, then pour water into these furrows and after it settles we place boards along either or both sides of the row.

A. E. KUNDERD.

Behavior of Bulbs in Dry Weather.

TO THE EDITOR:—

Is there any good reason why Gladiolus bulbs should *split up* into two, three or four or more bulbs and throw very few bulblets? Some of my mixed varieties did this during the past year, and I thought it might be because the weather was rather dry early in the growing season. If you can throw some light on this subject it will help me greatly. Do you think old bulbs are especially likely to divide in this way, and are the bulbs resulting from such division as useful for blooming?

C. M. R.

Answer:—Large bulbs of most types evolve two or three bulbs—in some types these do not do so well especially if they bloom out and mature seed. If cut with little foliage they bloom nicely the next year. When these or any large bulbs bloom out they produce few bulblets even if cut as suggested. Some types once they acquire this stage of evolution begin to disintegrate and need careful culture to preserve them—especially in an over wet or over dry season, particularly when these extremes follow each other.

There are some types that have this habit of evolving into two, three or more

bulbs instead of blooming. Sometimes one will bloom, the remainder come blind, and my experience is that some of these types are better eliminated from one's stocks.

In our experimental breeding we used some of these types to prove certain points and the results are that some bulbs evolved into 6-7-8-9 large and second size bulbs and nearly every one bloomed nicely, and yielded liberally in bulblet production. We are using these for further experimentations.

I would advise the amateur to cut off just above the foliage when the spike is about bloomed out—about this time I would give the plants a light top dressing of any good fertilizer and rake it into the soil. This will help build up the bulbs for the next season when they should yield fine results.

C. BETSCHER.

Soil for Gladioli—Depth to Plant.

TO THE EDITOR:—

Will Gladioli do as well on clay loam as on a sandy soil? Should any special care be given if the clay is rather heavy? How deep should I plant on clay soil?

C. R. L.

Answer:—I have planted Gladioli on nearly every kind of soil and find they do almost equally well in nearly every place, if given proper culture. Have never planted as deeply as many recommend, finding that four inches below the general level of the soil answers for all kinds of soil. In cultivating we work the earth toward the stalks covering the small weeds and helping to keep the stalks upright when in bloom.

E. H. CUSHMAN.

Future of the Gladiolus.

The Gladiolus is without doubt the coming flower. In the past it has never had the appreciation it deserves at the hands of the public at large. It has every possible qualification of a universally applicable and favorite flower. To many the Gladiolus is unknown. Among those who are acquainted with it, very few know that it can be planted as late as June 15th to July 1st and thus give a period of bloom extending up to the very end of the season or until the first killing frost cuts the flower buds. On the other hand, by planting early flowering varieties as soon as danger of frost is past, bloom may be had by July 1st or even earlier in localities further south. The present development of varieties seems to indicate that still earlier flowers may be depended upon in the next few years.

The Gladiolus Has Arrived.

BY PAUL L. WARD IN *The Rural New-Yorker*.

AS a summer cut flower the Gladiolus stands preeminently the best.

Every flower expands in water, and a bouquet is good for two whole weeks. It is not well adapted to bedding purposes, and I believe it is a mistake to plant it alone in rows or beds for the effect it will produce as such, but everyone should grow it in the garden for cut flowers for the house. This flower has been the particular prize of the hybridizer. It never comes true from seed, and so often produces superior sorts from carefully crossed seed, that nearly every commercial grower has his bed, or patch, or acre of seedlings, from which he hopes some day to give to the world the best one

produce bulblet offshoots rapidly enough to become commercially valuable. Likewise some new kinds are very difficult to keep through the Winter and must be thrown aside for that reason. The arrangement of flowers on the spike is still another important feature, as a haphazard, some down and some up, etc., form makes an exceedingly poor-looking spike, no matter how good the flower is.

Best of all, these glorious flowers are about as easy to grow and have as weeds, and multiply so rapidly that with a small start a private or commercial collection is but a matter of a few years. The long catalogue lists may be puzzling to you, so I give here a shorter one, comprising



"Mrs. Francis King."



"America."

yet. Primarily the aim was for a larger flower. That this has been attained in a remarkable degree such kinds as *Princeps* and *Mrs. Francis King* well prove. Secondly the matter of color demanded attention, and in selfs practically all colors are represented, though the pure white has almost defied the effort of man. *Rochester White* now claims to be pure white even to the anthers. *Augusta*, *Europa* and *Peace* are nearly white and very beautiful, *Peace* being a massive flower on five-foot spikes and foliage to match. Pure yellows and reds are plentiful, but blue still holds out, though there are a number of good parti-colored blues.

The power of rapid reproduction has always been kept in view, and many otherwise good varieties have to go to the discard because they do not divide and

the whole range of color and with no poor ones. For red get *Mrs. Francis King*, a true giant and of great beauty. *America* the most grown of any known sort, is a shell pink, large, exceedingly beautiful and is one of the three varieties that florists want in quantity. Early cut flowers of this kind for your city market would be worth your while. Later in the season there is a glut of even the best kinds. Early April planted bulbs in rich, sandy soil and in full sun will hit the high price season for *Americas*. *Augusta*, a lavender-tinted white, is another of the three mentioned. It is a rather small flower, but splendidly arranged on the spike and many open at a time, one of the best for design work. *Mrs. King*, first referred to is the third. *Panama*, in form like *America*, is a deep-

er pink, and is just being introduced. It is one of the extra good ones, and you may not be able to find it listed. *Golden King*, about the best of the yellows, is a giant in every way. *Klondyke* is a smaller, less expensive yellow, but good enough for anyone. *Canary Bird* is one of the best pure yellows. Get *Peace* for a giant white, *Taconic* for a fine pink, *Blue Jay* or *Baron Hulot* best blues. *Cracker Jack* and *Mrs. Beecher* are large reds, curiously marked with white, which should be in your list. *Evaline* is a large smoky lilac or purple, a beauty. *Brenchleyensis*, bright scarlet, opens nearly its entire quota of buds at once, and is fine for a tall edging of hardy perennials to come in ahead of tall *Salvias*. The above are by no means all the good ones, but if you are a beginner and get some of all the above, your delight at blooming time will be great. If an enthusiast, add a few new ones each year, but grow each kind separately rather than mix them all up.

If you grow a mixture, bear in mind the fact that red varieties have a tendency to multiply more rapidly than other colors, and your collection will show a constantly increasing proportion of the reds. Also remember that old bulbs soon stop multiplying at all and run out, so if you do not wish to have to buy all over again in a few years, keep a new lot coming on each year from the little bulblets found around the base of the old bulb at digging time. Their culture is very simple. Soak twenty-four hours in warm water and plant thickly as you would peas, one to two inches deep. They will appear in a few weeks looking like stiff grass. Keep cultivated and thoroughly weeded and dig soon after hard frosts. The bulblets in turn will be found to have made a lot of new bulblets in addition to their now being bulbs of about one-half inch in diameter. The small bulbs will bloom the second year and make more bulblets, and so on in a never-ending cycle. You may soon get too many bulblets, but they are commercially valuable, and your seedsman or florist will undoubtedly take your surplus at a good figure if true to name and of good sorts.

Plant large bulbs four inches deep, from one inch to any desired distance apart. Give thorough cultivation and water if possible at blooming time. Never let fresh manure come in contact with growing bulbs. Dig bulbs in Fall and treat as potatoes, but they must be kept a little drier than potatoes. When cutting flowers for the house, do not cut much leaf, as it will

ruin the bulb. Cut when the first two flowers are well expanded. In conclusion, just a word about growing from seed. It is very interesting. Save seed only from finest named sorts and if you understand cross-pollenizing, it is advisable to keep a record of the parentage of your seed, for if you should get a valuable one, it could be much easier disposed of advantageously if you knew the cross that produced it. Treat the seed much the same as bulblets, only it may be the third year before you get the flowers.

Gladiolus Vitriacensis.

This is a new race of hybrid early Gladiolus, originated by Messrs. Cayeux & Le Clerc, which was shown at a recent session of the French National Society of Horticulture. It is recognized as a valuable addition to the Gladiolus family, being an early large-flowering variety, and comes in to fill the long gap between the early dwarf hybrids and the *Gandavensis* and *Lemoinei* classes. The variety shown at the above session is the first of the race which the originators have named *Gladiolus Vitriacensis*, this being the issue of a variety of *G. Lemoinei* (cultivated in pots and early blooming) crossed with varieties of the early dwarf hybrid Gladiolus.

The plant grows to a height of more than 40 in., hence being taller than the parent types, and is of vigorous habit. The blooms are set rather far apart on the spike and are well adapted in form to decorative work. The flower, of medium size, is brick red in color. The three lower divisions of the perianth have the spots that are characteristic of the early dwarf hybrids. These spots are dark crimson, divided by a central yellow line. The originators have other varieties of the same race, of different colors.—*Revue Horticole*.

Naming the Gladiolus "May."

A bit of history is always interesting in connection with familiar objects such as flowers well known to us. Matthew Crawford of Cuyahoga Falls, Ohio, originator of *May*, which is illustrated and described on our front cover page this month, writes, under date of Jan. 16, 1914, as follows:

"The *May* has become very popular both in this country and Europe. I raised it from seed and named it for May Carter, one of the grandest characters that ever lived. She is now Dean of Lawrence University, Appleton, Wis. She was born in this town."

THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.

Published Monthly by Madison Cooper, Calcium, New York.

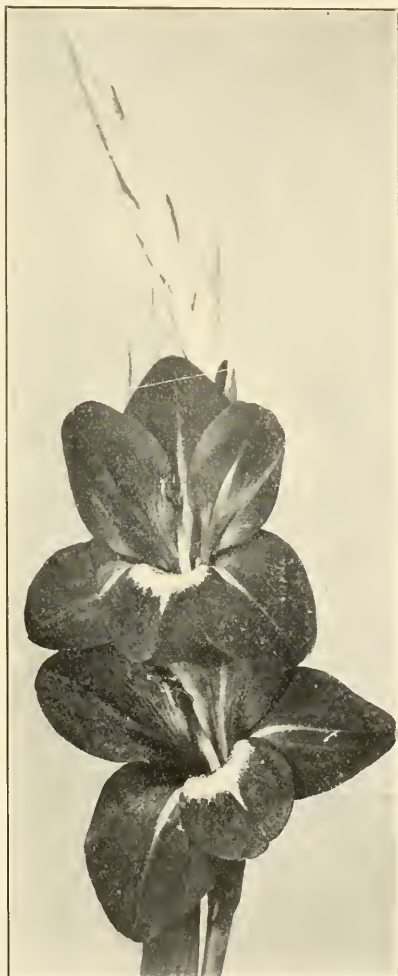
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No. 5

This variety has been called the "Amaryllis-Flowered" Gladiolus. It is the result of crossing *Cruentus*, a crimson flower species from Mt. Killimanjaro in Central Africa, with pollen from *Mrs. Beecher*, a variety of the *Childsi* strain, but resembling *G. Cruentus* in its main coloring.

The flowers are of immense size, measuring 5 inches and sometimes more across. The coloring is a dazzling scarlet with a patch of buffish white bordered by clear white on the lower petals. Usually but one or two of the flowers are in bloom at a time, but occasionally spikes will produce three or four



blooms before the first has faded.

Princeps is perhaps the finest bright crimson variety yet produced, and is successfully grown in practically all countries of the world. It has perhaps received more awards from horticultural societies of high standing than any other Gladiolus.

While it retains the essential coloring and foliage characteristics of *G. Cruentus*, yet in plant and flower it is at least four times as large, being very striking.

Princeps is easy of cultivation and of rugged constitution.

See historical sketch on page 79.

GLADIOLUS—"PRINCEPS."

Growing the Gladiolus.

SUGGESTIONS—CULTURAL HINTS—CUTTING AND CARE OF THE BLOOMS—HARVESTING
AND CARE OF BULBS, ETC.

BY MADISON COOPER.

A FRIEND of mine who is a great lover of the Gladiolus says:—"There is no flower that has such a combination of ease of culture, brilliancy of bloom, durability in water as a cut flower, and long blooming period as the Gladiolus. There is no reason why every family cannot enjoy this flower for the reason that it is as easy of culture as the potato."

My friend is quite right. The Gladiolus is easy to grow, and while it does not necessarily require more care than the potato, yet a little extra care and attention will be well repaid in additional and finer blooms. You can plant a Gladiolus bulb in most any way and it will give you a flower spike, but attention to a few simple details will produce superior results.

SOIL AND LOCATION.

Most any kind of soil will answer except an extremely hard or stiff clay. A moist, sandy loam with plenty of humus or decaying vegetable matter is especially adapted. A sunny location is best, but a half shady situation, if no better is available, will answer if the bulbs are large and the variety vigorous. They should not be planted near large trees whose roots run near the surface of the soil. Secure, if possible, a location sheltered from severe winds but with a free circulation of air.

PREPARING THE GROUND.

Deep spading late in the fall followed by a heavy application of cow or horse manure will produce best results. A good commercial fertilizer will answer equally well if there is plenty of humus in the soil. In the spring apply well rotted stable manure or pulverized sheep manure and it is necessary to give a shallow spading or deep raking to thoroughly pulverize the soil and mix the manure with it. On a larger scale the ground may be worked in the regular way by applying manure in the fall and then plowing deeply in the spring. Then apply well rotted stable manure, a good commercial fertilizer, or pulverized sheep manure and harrow thoroughly into the soil. Care must be taken in planting large bulbs that the ground be deeply spaded or

plowed, as it is necessary that large bulbs be planted to a depth of 4 to 6 inches and the ground should be worked at least three inches deeper to allow for root growth. Care should be taken that no fresh manure comes in contact with the bulb.

FERTILIZER.

Any good commercial fertilizer is beneficial if the soil is not already supplied with the necessary elements, but strong new soils do not need chemicals as a rule. Stable manure and hardwood ashes have been used to grow Gladioli for years on the same piece of ground with no other added fertilizer. Pulverized sheep manure as suggested above gives quick and satisfactory results.

TIME OF PLANTING.

As soon as frost is out of the ground plant for early bloom, and follow by additional plantings every week or two until about July 4th. The late planted will give bloom till frost cuts the flower buds.

DISTANCE AND METHOD OF PLANTING.

The arrangement of bulbs is a matter of individual taste, but planting in rows is desirable. A trench may be made the width of a hoe and 4 to 6 inches deep for the larger bulbs, and the bulbs planted about 1 to 3 inches apart in a double row, the rows about 6 to 8 inches apart. Most people plant in single row, but for this reason are likely to plant too shallow. Bulbs from 1 inch upward in diameter should be planted at least 4 inches deep, and if in sandy soil from 5 to 6 inches is better. The distance apart in the row may be from 1 to 3 inches, but close planting is desirable, as the plants support each other, and if the location is sunny there need be no fear of crowding even if the bulbs are as close as one inch apart. Press earth firmly around the bulb to a depth of two or three inches, then fill trench with loose soil.

CULTIVATION.

When the bulbs have sprouted the ground should be carefully raked so as to allow them to come through. Frequent raking and hoeing to keep the soil mellow and keep weeds from growing is neces-

sary and hand weeding, if planted in double rows, is also necessary.

IRRIGATION.

During a period of drought, or if peculiarities of the soil make it desirable, rather free watering is beneficial and sometimes indispensable. It must be remembered, however, that a soft succulent growth is not desirable for the plant, flower or bulb. A brief period of rest from growth just before the blooming period will give flower spikes of better quality and more durability. This may be secured by withholding water.

Do not give shallow or thin watering frequently, but rather water heavily at longer intervals, so that the water can reach the roots which are well down in the ground. Use water at the rate of about one to two quarts per square foot.

AS A CUT FLOWER.

Remember that the Gladiolus is pre-eminent as a cut flower, and the greatest satisfaction is obtained by cutting the spike when the first bud opens and allowing the flowers to develop indoors. Every bud will open and more perfect colorings will develop than would be possible if left in the sun. Remove the terminal buds, which checks further development of the stalk, and throws the strength of the plant into the larger and earlier maturing flowers. Cutting the spike when the first bud opens is also a benefit to the bulb, as the strength of the foliage is required by the bulb to develop bloom for another year's growth. For this reason, do not cut more than one or two leaves of the foliage with the flower spike. As the blooms wither they should be pulled off. The stem should be shortened a little, cutting with a long diagonal cut and the water changed daily. Set the flower in a cool place at night. The Gladiolus will remain fresh and continue to open additional buds for a week or ten days or even longer.

HARVESTING AND CARE OF BULBS.

It is not necessary to wait until the plant dies or is frozen to begin digging. After blooming, a few weeks may be allowed for the maturity of the bulbs, and then after the first frosts, (about September 15th to October 15th in the north) the bulbs should be taken out of the ground, dried slightly and stored for winter. This is best accomplished by loosening the row on each side with a spading fork; when the new bulb or bulbs, with the old bulb, roots, bulblets and stalk attached may be pulled up. The stalk should be cut from the bulbs at once within about half an inch to three-fourth

of an inch of the bulb. Expose the bulbs to the sun for a day or two, then place them in a thin layer in a dry basement or cellar. They must not be allowed to freeze. A temperature of 35° to 40° is most suitable for storage.

After a few weeks or as soon as reasonably dry, the roots and the old shriveled corm or bulb may be removed together with the small cormels or bulblets. This work is commonly done most any time during the winter, but the sooner it is attended to after digging, the better. The larger bulbs should be stored on shallow trays or shelves, while the small bulblets which have never grown tops or foliage should be stored with a mixture of half sand or earth in bags, boxes or tubs.

BULBLETS.

In the care of bulbs or bulblets they should be watched from time to time to see that there is not an excess of moisture sufficient to cause molding. The larger bulbs will endure a rather dry atmosphere while the bulblets must be kept somewhat moist to prevent the outer shell from hardening.

Bulblets from strong growing varieties will throw a few flower spikes the first year they are planted, but most varieties will not bloom until the second or third year's planting, depending, of course, on fertility of soil, season, etc.

The Gladiolus Situation.

[From *Horticulture*, Boston.]

EDITOR HORTICULTURE:—

Dear Sir:—I note with interest your editorial on "The Gladiolus Problem" and I note with pleasure your remarks concerning American grown bulbs, and naturally my hope is that American buyers and planters will come to the same conclusion, for it does seem a pity that the one bulb that can be grown so successfully in America and has really come to be a distinctly American industry should now be threatened with an unfair competition. I say unfair because I do not think that we are receiving a fair treatment from the Government when it places only 50c. a thousand duty on a bulb that can be grown so successfully in America and places higher duties on bulbs that cannot be increased with any degree of success in America.

I would like to see some concerted effort made by the American growers, backed by the trade papers to secure a just adjustment of the tariff on these bulbs.

I. S. HENDRICKSON,
Flowerfield, N. Y.

Cultural Hints on the Gladiolus.

BY JOHN H. UMPLEBY.

GROWING FROM BULBLETS.

In growing standard varieties and mixtures of Gladioli from bulblets that were produced the past season, I make the furrows five or six inches deep. If I do not have a great many of a variety, I place a pole that is straight and smooth in the bottom of the furrow and walk on it. That makes a perfectly straight channel in which I plant the bulblets very thick, three or four hundred to a foot. If I have a large quantity of bulblets the channel is made by drawing a long chain through the furrow. The bulblets are covered with about an inch of soil and a high grade of fertilizer with a preponderance of potash is sown in the furrow, then the furrow is filled in level. By this method the bulblets are kept continuously moist and, being sown thick in a narrow line, they help each other come up, and nearly all will grow, even to the very smallest bulblet. The bulbs produced are good size, considering the close planting, but the object is to get all the bulblets changed into bulbs to grow on the next year. I much prefer to have my bulblets two year's old; they start growing much sooner, and I have no need to plant so deep, and with a reasonable amount of rain early in the season, they all grow. I commence digging in early fall; have done that as early as August 9th, and they did as well the next season as those dug later.

GROWING FROM SEED.

In growing from seed I use flats with three or four inches of soil, two seeds to the inch of row, rows two inches apart. Cover the seed with one inch of clean, sifted sand, and there will be few, if any, weeds. I have grown seed in deeper boxes which do not require watering so often, but they are too heavy to handle; seedlings must be sufficiently watered to keep constantly growing, being careful to not overdo it and cause rots and spots. The product is stored in a cool place free from dampness. Many of the larger ones will bloom the next year. Bulblets of expensive kinds should be planted in precisely the same way as seed, one-half inch apart in the rows. Grown in this way many will bloom the next year. In growing from seed in the garden they are covered with boards until they are coming up and then the ground is covered with mulching material. Water should be applied as needed until September.

PRODUCING CUT FLOWERS.

In producing cut flowers, make furrows as deep as a shovel plow will make them, and on well drained land, rows three and one-half feet apart, bulbs spaced according to size, single file, at such distance that at digging time they touch each other. On such land the bulbs produced are free from rots and spots. Such kinds as *Augusta*, *Buchanan*, *May* and *Eugene Scribe* do not produce sound bulbs on wet land. I have not tried *Primulinus* as yet.

In cutting spikes I use a knife with a handle that fits the hand with a very sharp sheeps foot blade, cut square across between the upper pair of bulb leaves, nearly through, bend the spike over and it can be taken out, leaving all the leaves almost, if not entirely, intact, and the bulb produced will be as good for blooms the next year as a younger bulb. However, it will not produce as many bulblets. It isn't to be expected that you can grow flowers and much spawn at the same time.

Inducing Rapid Increase.

The following query has come to hand, and if any of our readers can throw any light on the subject, we would be glad to give them the necessary space to answer same. If there is any method which will result in greater increase it would, as suggested, be very valuable in connection with the multiplication of new varieties, and perhaps the same method might be applied to bulbs which are naturally shy producers.

TO THE EDITOR:—

Please state if there is any special mode of treating Gladiolus corms to induce them to produce more freely of cormlets than they ordinarily would? Florists are quite familiar with the method used to this end with hyacinth and tulip bulbs. Would this or any similar treatment serve the same purpose with the Gladiolus? The speedy multiplication of rare and scarce varieties is a matter of much importance to growers, and if any one possesses the secret we "want the world to know it" for the general welfare. C. A. W.

A successful grower of bulbs from cormlets or bulblets reports that he has had good success by mulching with lawn clippings, and he says that the use of high grade commercial fertilizer on the lawn, the lawn mowed often and the clippings used as a mulch seems to be just the fertilizer that the little fellows need. This plan may be worthy of trial. Certainly some method of keeping the ground moist is advisable.

MRS. AUSTIN'S TALKS FOR AMATEURS.

NO. 4.—WEEDING AND LATER PLANTINGS.

Weeding is the main thing now, for we no sooner get bulbs planted than it is time to weed them. When we planted, we were particular to ridge the rows high like potato planting, and a few days after went over them with the horse weeder, which leveled the ridges and destroyed the many tiny weeds just starting into growth, and now again they must be ridged, in fact this alternate ridging and leveling with the cultivator and weeder should be kept up until the growth is six or eight inches high, when the use of the weeder may be discontinued, but keep the cultivator in steady service. In small gardens this work may be done with the wheel hoe and hand rake.

We have had a very busy month, and are still in the midst of planting. The bulblets have shown their appreciation of careful, early planting by promptly unbarring their doors and coming from their shell homes through the moist soil into the sunlight. Perhaps they have not all arrived yet, as there are always some that play by the wayside, but will come straggling along later. They should have special attention now, and if they were planted in rows wide enough to admit of horse cultivation, cultivate well between and up to the rows; then, with an ordinary garden rake, carefully rake crosswise of the rows, this will remove soil that may be ridged a little too high by the cultivator, will kill the small, early weeds, and leave the green blades of the bulblets standing upright and free. The small plot may be worked the same way by using either the hand cultivator or hoe and substituting the garden rake.

A friend with an ingenious turn of mind, induced the village blacksmith to make a tool something on the plan of the ordinary garden rake, but with prongs of several inches in length, and with it works crosswise of the rows of the large sizes in the same manner as mentioned for the bulblets.

With the early plantings well weeded and cultivated, we will leave them indulging in growing races and proceed to further plantings. We have so many spaces that we had not thought of, that we are ordering more bulbs at this late date, and find them rather hard to get now, for most of the stock is no longer available, but is in the ground. We will plant a row each side of the lettuce and

by the time it is used, there will be a double row of tall Gladioli to come into later bloom. We are watching that row of early peas too, and when they are in full flower we'll slyly tuck another "setting" under their protecting wings. What armfuls of bloom we will have from the extra spaces thus filled. Do not forget that brilliant scarlets and orange reds are pleasing contrasts among the shrubbery. We are planting some large sizes of one of our own pet seedlings in front of the clump of Newport hollyhocks, and they will be nicely in bloom after the seed spikes of hollyhocks are cut.

TEST PLOT.

Some one says that to learn the true disposition of acquaintances, one must "summer and winter with them," and this applies to Gladioli also, so we have purchased a few each of several varieties to summer in our test plot and winter in our cellar.

Sometimes among the new varieties we find dear old friends masquerading under entirely new names, and sometimes the names are only twisted a little, like—Miss Marquisetta Bisselle, whom brother Bob knows as Mag Bissell—but she fluffs her hair and wears a gown that doesn't fit anywhere, unless perchance, around her feet, and even brother Bob uses the new name when company comes. Likewise the Gladiolus: we are told that intense cultivation, rich food and plenty of water has a tendency to produce variation. In any case, it is important that the new varieties be especially well grown to bring out all latent beauty of form and color.

In wintertime we thoroughly studied and made note of the desirable traits of different varieties, and planned the crosses we wish to make this season in our efforts to produce the ideal flower visioned in our brain, so we shall plant all those in close proximity to each other, and our first generation of seedlings where we can compare their good points, and re-cross if we wish without carrying pollen far, for it's sometimes very precious. For instance, if we wish to use pollen from Gladiolus *Primulinus* on our best yellow seedling, we would plant them either side by side or opposite each other. The varieties of other growers should be labeled with the name of the originator as well as the name or number of the variety.

THE SEED BED.

There are many different ways of making the seed bed. The seed does not have a hard shell like black bulblets, and

will come up as quickly under nearly the same conditions. An easy way, but possibly not the best, is to plant about the same as bulblets, only having the seed drills more shallow. Sow thickly and give horse or hand cultivation between the rows, keeping the rows covered with bagging or old carpet or in any suitable way to prevent drying out. Of course the covering must be removed when the seedlings appear. MRS. A. H. AUSTIN.

Care of Gladioli as Cut Flowers.

Cut the spike when the first flower opens and place in water without overcrowding. Remove the terminal buds soon, as this checks stalk development and throws the strength into the larger and earlier maturing flowers. The end of the stalk should be shortened and the water renewed daily with frequent cleansing of the vases. In shortening the stalk cut diagonally, to insure free absorption of water by the spike without the contamination and obstruction, caused by sediment, if cut at a right angle.

The fact that blooming the spikes in the shade of a room or piazza modifies the field colors, from bright shades and tints to delicate flushes and shadings,

also reduces the latter types to the faintest tinge of color or white, is well known to experienced growers.

To ensure this most desirable result, place the vases of these highly colored types in the early morning sun for an hour or two daily, preferably after renovation and renewal of the water. This practice will also enable the retention and normal presentation of the original delicate tints and shadings referred to in the preceding paragraph, if so desired.

As it takes about three days after cutting to bring the spikes into strong blooming condition, this should be allowed for in advance of the date of intended use. The spikes can be shipped a thousand miles by standing them on end in suitable baskets or boxes. On arrival, cut off the end of the stalk, and remove the terminal buds before placing in water, they will then revive quickly and with proper care give pleasure for a week or more.

H. H. GROFF.

It may interest our Eastern growers who are just now planting bulbs to know that W. W. Wilmore, Jr., of Wheatridge, Colo. sent us under date of April 15th a spike of *Gladiolus Atrovialaces* which he stated was cut that day.



A partial view of the Gladiolus gardens of Clark W. Brown, Ashland, Mass. This view was taken from near Mr. Brown's residence looking toward Cherry Street and the railroad. The Gladioli shown in the foreground are *Augusta*.

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Vol. I.

May, 1914

No. 5

Curing, Storage and Forcing of Gladiolus Corms.

It was suggested by Mr. G. D. Black last month that Gladiolus bulbs will lose much of their vitality if stored in a warm place. We beg to suggest in this connection that altogether too much stress is laid on the necessity for *drying* or *curing* bulbs before storing. The more drying and curing there is done, the greater the loss of vitality, and only enough drying should be practiced to free the bulb of surplus moisture contained in the skin or husk, so that there will be no tendency to mold. After that the bulbs can be stored in thin layers safely in a reasonably dry air at a temperature of 32° F. to 40° F. for almost an indefinite period.

It is not our idea to suggest that no drying be done, but to caution against overdoing the matter. A comparatively slight drying is all that is really necessary, especially if this is done in full sunshine and a full circulation of air. Sunshine tends to not only dry out the husk quickly, but it is a great purifier and germicide and kills mold spores and certain forms of fungus growth. The sun also tends to eliminate various scab diseases and rots, and is a valuable help in preventing troubles of this kind.

The storage of Gladiolus corms has not been given the care and attention in the past that it should have had, and very little is known on the subject except as the practical details have been worked out by each individual for himself. It is suggested that storage under refrigeration is the right place for Gladiolus bulbs, and if they are so stored we believe that they may be carried, as before suggested, at the temperatures stated for almost an indefinite period and practically without deterioration. It would seem that bulbs might be held over after digging in the fall, until the next fall, for forcing during the winter. This is only by way of suggestion, but someone will doubtless make the experiment. It is well known that plant life which is retarded in this way by cold storage at uniform temperatures, and held past its natural season of growth may be forced much more quickly. Lily of the Valley pips especially are a good illustration, and there seems no good reason why the same principle will not apply to the forcing of the Gladiolus. If this method is properly worked out, we may expect, within the next few years to see many different varieties used for forcing, and the Gladiolus will thus become an all the year round flower.

MADISON COOPER.

A Multiplicity of Gladiolus Types Desirable.

The communication of Mr. Kunderd in the March issue of THE MODERN GLADIOLUS GROWER, implies the true freedom that should prevail as to Gladiolus types. To circumscribe its form of development arbitrarily, would be to limit its glory. It is a compelling flower and because of its appeal to, and good behaviour with all classes of people, it may be termed a democratic race.

May its influence be extended to yield forms and colors alluring to all shades of æsthetic taste. If your neighbor likes the frailer forms and daintiest coloring, finding in them greater attraction than the taller and more flaunting types, by all means recognize his choice and provide him with the finest of this type to be had. If one admires the hooded modesty of *Primulinus*' children, surely he should have that worthy fancy gratified. And also as to the ruffled and other pleasing characteristics.

Happily, the Gladiolus already has too many true friends to be in any great danger of cramped development. But if we are to reach the highest attainment in the various possible types, we must have strong adherents of each section, to the extent of large groups working strenuously for one result. Some features may be championed by individuals only, but if each group or individual stands faithfully to his or their ideal and patiently builds, we may confidently anticipate magnificent results and a variety of types sufficient in number to win all flower lovers.

CHAS. F. BARBER.

There is an old saying that "the right way to improve on a good thing is to have more of it." It would seem, however, that this does not always apply. Evidently some of the most experienced Gladiolus growers figured that the variety *America* was a good thing, and the way to improve on a good thing was to have more of it. *America* has been grown so largely during the past three years that

there has been a big surplus on the market during 1914, and it is quite likely that 1915 will also see a surplus. *America* will be a good thing for many years to come, but it is now down to a very close basis and prices will be low.

Massachusetts Agricultural College—Students Visit Flower Show in New York.

A party of seven from the Massachusetts Agricultural College made a trip to New York to visit the Flower Show on Wednesday and Thursday. The party consisted of Professor A. H. Nehrling, the head of the Floricultural Department; C. L. Thayer, graduate assistant, and several of the seniors majoring in Floriculture; G. A. Reid, H. W. Levine, S. L. Freedman, R. Cushman, and A. S. Thurston.

The trip was purely for educational purposes, to give the students an opportunity to become acquainted with a larger number of plants, to study the methods of staging the exhibits, to become familiar with the important firms in the profession, and also to meet personally some of the prominent men. This is one of the many advantages which the students taking Floriculture at the Massachusetts Agricultural College have, since the College is located near the horticultural centers of the United States. The students enjoyed many courtesies, being addressed by such men as Benjamin Hammond, the Secretary of the American Rose Society, John Young, Secretary of the Society of American Florists, Fred Lautenschlager, of the Kroeschal Boiler Company, I. S. Hendrickson, of the John Lewis Childs Co., who gave them information on many of the new varieties of Gladioli, and W. N. Pierson, of Cromwell, Connecticut. This aided materially in making the trip interesting and profitable.

Fertilizer.

We make our own fertilizer, so do not have to pay freight on "filler." A formula that has given us the best of satisfaction and that the Glads respond to, is represented by 50% sulphate of potash, 25% sulphate of ammonia and 25% nitrate of soda, by weight. This is sprinkled along on top of the row at planting time, care being used to use just a little. Should one be afraid of getting too much, mix one part of the fertilizer to four parts of sifted soil, thoroughly mix and apply.

JOE COLEMAN.

WAYSIDE RAMBLINGS.

MAKING MONEY IN GLADIOLI.

I have been asked a number of times by young men, if it would pay to go into the Gladiolus business to make money. I do not know. I have been in it all my life, but have never made a dollar. I have paid out money enough for new varieties to buy a good sized farm, but have made no money, nor have I cared to. Most producers of new Gladioli are rainbow chasers, constantly reaching upward for an ideal, and forever failing to grasp it. These men care nothing for the money that might be made. They look for their compensation in the pleasure and satisfaction the work gives. Let no one think that I do not know the value of property and the standing that property gives to a man in the community in which he lives, but there are better things than money. A man cannot buy contentment and happiness; nor will money keep sickness, sorrow, or death from the door; and each and every one of us must work out his own salvation with fear and trembling. Salvation cannot be bought. For these reasons I will not advise any one to go into the Gladiolus business to make money.

VALUE OF A SINGLE GLADIOLUS BULB.

Is a bulb worth one thousand dollars? Yes. Who will say that the first bulb of *America* was not worth one thousand dollars. Two thousand dollars is offered for 1000 bulbs of a better white Gladiolus than *Peace*. This offer has stood for two years, and nobody has grabbed it yet. A pure white, with no stain of color, as large, as vigorous, as productive, and on as fine a spike as *Peace*, would be well worth a thousand dollars for a single bulb. There are several whites that are better in flower than *Peace*, but they are all sadly lacking in the other essentials. Mr. Cowee need not worry; he will not have to dig down into his pocket for that two thousand dollars for several years yet.

BETTER PRINTING.

The plea for better printing by Mr. Spencer is all right, but there are two sides to the question. Who pays for these expensive catalogues? Certainly, not the man who sends them out. He has to have higher prices for his stock to meet the cost of these nice catalogues. Therefore, it seems to me to be better to give the customer the benefit of the

cheaper printing. All price lists should be printed on nice paper and done in a neat and workmanlike manner, but there is no need or necessity for great expense.

BEGINNING OF GLADIOLUS POPULARITY—

A SKETCH OF THE IMPROVEMENT

OF THE GLADIOLUS.

When did the present popularity of the Gladiolus begin? Probably the introduction of Max Letichlins' *Saundersi* hybrids, better known as the *Childsi* varieties started it; but the splendid exhibits of the so-called Groffs' hybrids at Buffalo, Chicago and St. Louis carried it on. I always was partial to the *Childsi* for they were a long step forward, and I do not believe that there is a grower of new varieties in all the world that is not indebted, more or less, to the *Saundersi* hybrids.

The next great improvement came with the *Princeps*. Had Dr. Van Fleet never done anything else for horticulture he would deserve a monument as big as the Bartholdi Statue of Liberty. I notice that some catalogue *Princeps* as a *Childsi* and others call it a *Nanceianus*; neither of which is right. No Gladiolus ever produced carries such a distinct and pronounced character as does the *Princeps*, and it is an entirely different type from all others. It is the parent of a new race or family, and its seedlings and crosses carry the type. Why not leave it in a class by itself where it belongs? The trouble is, there are a lot of growers who are so thoroughly impregnated with the *Gandavensis* idea that they can see no merit in any other type. *Gandavensis* Gladioli as a leading race or family stepped out twenty years ago when the better *Childsi* were introduced.

The next great improvement came with the ruffled type of Mr. Kunderd. The ruffling adds immensely to the beauty. Last season I bloomed about a dozen sorts of ruffled, and among the scores of visitors to the gardens there was not one who did not express the greatest admiration for them. How they were originated I do not know. I doubt their being a cross of the species, as I do not know any species that bear ruffled flowers, and I am tolerably well acquainted with most of the species. They may be a sport or freak developed and fixed by years of patient and persistent selection. Probably Mr. Kunderd will tell us when he gets ready. At any rate it does not matter, the fact remains that we have them, and they are here to stay.

B. F. WHITE.

ZINC FIELD LABELS.

A piece of sheet zinc 10 or 12 inches long and one inch wide is a very good Gladiolus marker. It serves the purpose of stake and label and will last a long time. We find labels in the nursery that have been in the ground ten or more years, with the writing as legible as when first written. Write the name of the variety near one end with a common medium soft lead pencil. Old zinc is best for this purpose because the light roughened surface of the old zinc makes a better writing surface than the smooth, shiny surface of the new zinc. We usually have our labels cut at the tin shop, and expose them to the weather a few months before we need them to remove the gloss. Perhaps an acid would serve the same purpose.

A QUESTION OF NOMENCLATURE.

I have been asked to make a detailed list of varieties that have been given different names, and the different names that have been given to the same variety, as has been disclosed in our test plot, but I must decline as this is the work of the nomenclature committee. Besides I might possibly make the matter more complicated by being misunderstood, as few of us realize to what extent this renaming has been practiced. On page 44 of the March issue, friend Huntington takes exception to my statement that *Grenadier* is one of the names that has been applied to *Velvet King*. Perhaps other varieties have been given the same name. For instance if I say that *Taconic* has been sold under the name of *Perfection*, I do not wish to be understood to mean that all the other varieties that have been called *Perfection* are identical with *Taconic*.

G. D. BLACK.

CUTTING SPIKES OF GLADIOLI.

Referring to Mrs. Austin's answer in a recent issue, to the query on cutting spikes of Gladioli, would say: We cut in a much different fashion which, I dare say, does little, if any, harm to the corm, and gives us the required length of spike however long or short may be needed.

A sharp pocket knife is used, the small blades being most convenient. The blade is inserted in the stalk at the required distance from the ground to give the proper length. The stalk is then bent opposite the cut until it snaps. Then it is bent back which nearly always breaks it completely. Catching the spike below the lower flowers, it is twisted to right and left at same time pulling upward.

Nine times out of ten the spike will slip out, leaving the leaves in as good a condition as they were before. A few varieties grip the spike with their leaves. In such cases the foot is placed against the stalk at the surface of the soil to prevent pulling the corm from the ground.

PRICES OF GLADIOLUS BULBS.

In a remark made by Mr. C. Betscher in his "Advance in Gladioli," I take his thought, "Two things we must consider—the highest quality—lowest price possible," to mean the lowest price profitable.

I am of the opinion that we can incur such acute competition by extremely low prices as to make Gladiolus growing unprofitable to all concerned. I saw in a recent issue of a leading florists' paper, *America* corms offered at less than \$5.00 per 1,000 blooming size. This seems to me to be a ridiculously low price. Better would it be for that grower to throw his stock into the river than to force competition to such prices. Certainly Gladiolus growing is unprofitable to him or he has some worthless stock he is trying to dispose of.

Besides, is it not true that we would lose as many sales as we could gain if we offer our stock at too low a price? Is it not true that the general public is of a suspicious mind, and infer that cheap stock is inferior to that of a higher price, although they may be one and the same?

Even though, my reader, we were able to produce *America* with a slight profit at less than \$5.00 per 1,000, from a business standpoint, is it not better to produce one thousand corms at four times the price, than four thousand at the same price? Who would not be willing to pay a retail price of fifty cents for a dozen corms of the same variety, this making a price of about \$40 per 1000?

It is my opinion that we are now offering varieties of many kinds at a figure extremely low. The one thing for us to do is to discard our numerous, worthless sorts and put our attention into those of superior quality. Growing fewer varieties and producing stronger and better corms will make our future success.

W. W. WILMORE, JR.

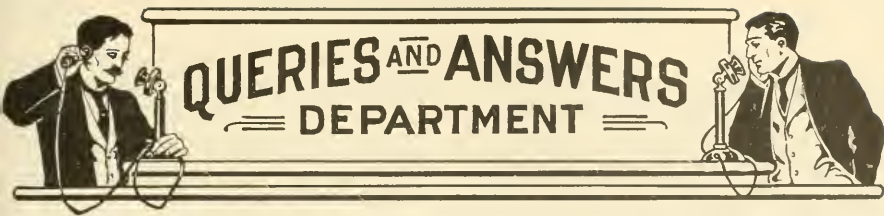
American Gladiolus Society.

The Committee on Nomenclature has approved the applications to register the following varieties of Gladioli:

JOHN LEWIS CHILDS, Flowerfield, N.Y.

Attraction Spot Henry Gilman

A. C. BEAL, Chairman.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Strains of America.

TO THE EDITOR:—

"We claim to have the highest grade of *America* in existence."—Adv.

Is there anything in this claim? Are there more strains than one, or wherein is one better than another?

R. R. G.

Answer:—Every grower naturally likes to boom his own stock, and any one can claim whatever he may choose. The proof of the pudding is another story, as the Bingville Philosopher might say. And yet there is something here that is worth looking into. We find an explanation of this claim in the circular sent out by this grower, and see that he bases the superiority upon the method of culture, which is not new. A full score of years ago my observation led me to adopt all that is embodied in the method, and I think any observant grower would soon learn it for himself. It has long been admitted that the best bulbs for planting are those grown from bulblets, and of the second year's growth. It seems as if renewing the stock from bulblets were a return to the original source of vitality, a rejuvenating of the stock, throwing off the ill effects of age. The fourth, fifth, and possibly the sixth years from the bulblet are without doubt the best portion of the life of the plant. The pinching of the spike to prevent blooming simply diverts the energy of the plant to other directions, presumably the growing a larger bulb. This result, however, is not the only one. In the variety in question, another result certain to follow will be the production of a most immoderate number of bulblets, probably much greater than if the bloom had been allowed to grow. This is like trying to stop a runaway,—check him in one place and he will jump the fence in another. There is a peculiarity of this variety which is worth noticing: Though a great producer of seed, its seed is late in ripening. After the bloom has fallen and the seed-pods are apparently full-grown, they will remain for a long time, several weeks usually, without going on to maturity, while the seed of other sorts is

ripening on every hand. The reason seems to be that this variety is such a wonderful producer in every line that it cannot carry on all these simultaneously, but after the seed product is well started it turns to the production of bulblets, and the seed is obliged to wait the leisure that comes later, usually only after the early frost gives warning. If some enterprising grower would inform a waiting world of some method of controlling the production of bulblets, of inducing or preventing their growth, he would earn our lasting gratitude. We would then be able to control entirely the character of our output, in regard to which the above method referred to, good as it is, is yet but a half-way measure.

WILBUR A. CHRISTY.

The American Gladiolus Society's Certificate of Merit.

How many certificates of merit has "The American Gladiolus Society" awarded? C. H.

Answer:—The Certificate of Merit of the American Gladiolus Society has only been awarded once; at Baltimore, August 16th, 1911. It was awarded to gladiolus *Mrs. Frank Pendleton*, exhibited by the writer. The judges were Matthew Crawford, E. H. Cushman and Harry Bunyard.

Since the Baltimore meeting the society has adopted a scale of points to be used for the certificating of varieties, and this necessitates the growing of a variety on the trial grounds to determine its vigor and resistance to disease, before a certificate can be awarded.

SCALE OF POINTS.

Resistance to disease	5
Texture of flower	10
Duration of bloom	10
Size of bloom	10
Color of bloom	15
Form of flower	10
Form of spike	10
Stem (length and stiffness)	10
Number of flowers on spike	15
Vigor (aside from disease resistance) ..	5

It is noted that the National Gladiolus Society (British) have adopted the following regulations regarding awards:

"Growers submitting Gladioli for Certificate or Award of Merit, must show three spikes, not more or less. An Award of Merit only will be granted on the first occasion that the variety is submitted to the Council. If a First Class Certificate is desired, the variety must be sent the following year to the Society's Trial Ground to be tried, or it can be reported on in the raiser's own ground by two independent members who will vouch for its condition. In no case can an Award of Merit and a First Class Certificate be granted at the same time, but all growers who have obtained an Award of Merit this year can send corms to the Society's trial ground next spring to be submitted during the summer for a First Class Certificate."—*Nat. Glad. Society's Autumn Hand Book 1913.*

Personally, I would not be favorable to the above regulations as to the requirements of giving the Certificate of Merit. If a variety comes up to the requirements, I cannot see any objection to giving it a Certificate the first year. The American Gladiolus Society has not made any provision for giving an Award of Merit, and this, I think, should be done at our next meeting, and I would suggest that the judges at our annual exhibitions be empowered to grant this award for cut spikes shown, if of sufficient merit.

In the meantime, you, who read this, if not already a member of the American Gladiolus Society should send in your application at once and plan to attend our next meeting and exhibition in Boston next August. L. MERTON GAGE, Sec'y.
Wellesley, Mass., April 10, 1914.

Bleaching Gladiolus Bulbs Artificially.

The following inquiry has come to hand, and while no information was gleaned on the subject, yet we are printing it together with three answers given, so that it may be known that the practice of bleaching Gladiolus bulbs is not in use at this time so far as known to the three experienced growers whose answers are given below. The inquiry is as follows:

TO THE EDITOR:—

I understand that some of the large dealers are supposed to use artificial methods of bleaching Gladiolus bulbs, and if you could give me information about this, especially as to the desirability of the practice and results obtainable, good or bad, I will appreciate it.
A. G. C.

Answer:—In all my experience in growing Gladioli, I confess I have never heard of the bleaching of Gladiolus bulbs. While this might not be injurious to the bulb, it is quite unnecessary and I should call it a bad practice.
ARTHUR COWEE.

Answer:—I have never heard of any

means or method of bleaching Gladiolus bulbs, so cannot give any information.

I. S. HENDRICKSON.

Answer:—I regret that I cannot help with any information in regard to bleaching Gladiolus bulbs artificially. The practice is unknown to me.

CARL CROPP,

Vaughan's Seed Store.

Variety List—Growing Gladioli from Seed.

TO THE EDITOR:—

I'm glad there is a magazine for Gladiolus growers. Last year I cut considerable foliage with flowers; now I know better. I fed my bulbs well so perhaps the injury will not be great. I read that some kinds produce 20 and 30 bulblets—most of mine produced 100, and the bulbs are 2½" to 3" across after all their "work." I have wasted no money on what I judged doubtful kinds, but I am very uninformed as I know no growers here. I have the following sorts: *America, Augusta, Blanche, Rosella, Rosy Spray, Glory, Wm. Falconer, Gen. Langlois, Peace, Princeps, Mrs. Francis King, I. S. Hendrickson, Attraction, Gil Blas, Klondyke, Hulot, F. L. Oakley, Superb, and Scarsdale.* Is this a good collection? All sold well, but orange-scarlet was the color most in demand. Each year when Roemer's catalog comes I want to try *Præcox*. This year I procured some American-grown seeds. What do you think of the type? I like to grow plants from seeds, but I have been shy of growing Gladioli from seed because it is a long time to wait for blossoms, and then they may be very inferior. I am delighted with THE MODERN GLADIOLUS GROWER.
M. E. M.

Answer:—The list of varieties you have is a good one, but it might, of course, be improved by addition of many others. Your list, for instance, does not include *Brenchleyensis*, one of the old standbys, and there are dozens of others which might be added. We would suggest especially *Golden King, Mrs. Frank Pendleton, Michigan, May, Madam Monneret, Princepine, Intensity, Scribe, Independence, Willy Wigman, and Primulinus Hybrids*, and there are also a number of more recent productions which are still comparatively high in price, like *Panama, Niagara, Europa, Rochester White, Mrs. W. E. Fryer and King Philip*, which should be among your list.

It is, of course, almost unfair for any one person to attempt to list up varieties which would make a high grade collection, and any such list is always sure to do an injustice somewhere. Besides those mentioned above, there are, doubtless, many others which are equally worthy of mention, but the above list is given without any attempt to include all the best varieties by any means.

Your American grown seeds might be

of most any type, and if you are interested in growing seedlings for the many varieties and combinations it will give you, you should secure seeds from a number of different sources. This is really where the greatest interest comes in. It certainly takes patience to grow seedlings, but they are worth waiting for, if you don't expect too much. It also takes time to properly develop them and judge them, in order to separate the good ones from those which are valueless.

MADISON COOPER.

Flower Spike of "America" from No. 2 Bulbs.

TO THE EDITOR:—

Will you please advise whether No. 2 bulbs of *America* will produce a full size flower spike? One large grower informed me that it will not.

G. W. H.

Answer:—A No. 1 bulb measures $1\frac{1}{2}$ inches and up. This may mean from $1\frac{1}{2}$ to $1\frac{3}{4}$ inches or from $1\frac{1}{2}$ to $2\frac{1}{2}$ inches in diameter.

A No. 2 bulb measures $1\frac{1}{4}$ to $1\frac{1}{2}$ inches in diameter and we believe the average No. 2 bulb will not produce a full size flower spike.

The large No. 2 bulb measuring about

$1\frac{1}{2}$ inches that is thick and strong, (the 2 year from bulblet quality) will, with good cultivation, produce a full size flower spike, but might not bloom quite as early as the No. 1. This best quality No. 2 would in our opinion produce a better flower spike than a flat No. 1 measuring $1\frac{1}{2}$ inches or a little larger.

A quantity of best quality No. 2 might average as fine spikes and possibly better than the average No. 1 as the No. 1 size is apt to divide and throw two or three spikes none of them being better than the best quality No. 2.

A best quality No. 1 that does not divide would produce an earlier and better flower spike than the best quality No. 2. This applies to field planting only.

A. H. AUSTIN Co.

Those who receive this issue of THE MODERN GLADIOLUS GROWER and who are not already subscribers should consider it an invitation to subscribe. We cover only one subject, but we aim to cover that much more thoroughly than any other publication. Complete information for breeding and growing will be available in bound volumes with index at the end of the year.



View in the Garden and Nurseries of Willis E. Fryer, Mantorville, Minnesota.

Gladioli are shown in the foreground, the row in the center being the variety *Mrs. W. E. Fryer*. The photograph hardly does justice to this variety from the fact that its color, a brilliant, fiery, orange scarlet, does not contrast strongly with its surroundings.

A Flower for Everybody's Garden.

AUGUST S. SWANSON IN "The Northwestern Agriculturist."

WHAT a beautiful sentiment this title of my subject conveys; seems to take for granted everybody has a garden. I wish it were true! But we all know, to our sorrow, conditions are not such.

While conditions in this respect have undergone quite a decided change for the better in towns and cities in the last few years, for which credit and thanks should be given those public spirited men and women who have given so liberally of their time and money to start the movement that is now very much in evidence in many cities, as the gardening clubs and the school gardens. We cannot say as much for the country dwellers or the rural communities; the very place where, by right and reason, we might expect to find things different, where the appreciation and love for flowers ought to be common and more highly developed than in the cities, because nature itself has set the example, given us an object lesson which is really very strange is not more heeded and appreciated.

The city dweller has so many artificial, hand made beauties to distract and pervert his senses from the beauties of nature, that it would not seem so strange if flowers were forgotten; that this is not so, we have overwhelming evidence enough to prove; because from the millionaire's palace to the humblest cottage, the people who live there, try their best to have some flowers in their garden.

Why should we not find the same sentiment prevailing in the rural settlements, among the farmers? Is it because his life is so much harder, so much more of a fight for a living that the finer sentiments are crushed or dead? I do not think so, not as a rule.

The pioneer who goes out to open up and wring a living out of a wilderness has no doubt a hard time for a while and must make a hard fight for a living, but so must the man who chooses to make his home in the city; I believe the chances favor the farmer when it comes to making a home. The difference is that the city dweller generally has his work, his factory apart from the home while the farmer has it all combined: That is, he has his factory at home and is constantly surrounded by his work; it is all about him all the time; he habitually thinks about his work, consequently most farms are factories, places to work—not homes. Can

you blame the young fellow for rebelling against such conditions and his wish for the life of the cities, where there also is work, but not all work, some play and recreations, some flowers?

I firmly believe our parks, our beautiful and well kept home grounds are doing as much as anything to attract the country dweller to the city. Why this is so does not seem reasonable, the country is the place for flowers and the farmer certainly should and ought to have a home, a home surrounded with flowers and not only a factory, a place to work, eat and sleep. We all know a home is a different institution altogether.

If we want the most of life, and the best it holds in store for us, we must develop the home sentiment, and anyone who feels that the home life is essential to the growth of the nation, homes not only in the cities, but homes also in the country on the farms, homes in which children, young Americans may be raised and developed, homes which they will not be so anxious to desert, but homes to which they will be glad to return, when perchance they have strayed away, and there is not one thing more powerful in making a home attractive than flowers.

How often have I met people, not only women, but fully as many men whom a certain flower recalled to them long forgotten memories of an old home; often have I heard them speak of grandmother's garden, or perhaps some other relative, but more often it was "Mother used to grow and have great success with flowers," and many a time have I heard the expression from old grownup people too. "I would like to make a visit to the old country to my old home more to see the flowers than anything else." Among the thousands of men whom I have met and with whom I have discussed flowers, I do not recall more than one instance where a love of flowers was not expressed. I can recollect, some years ago, two men came in my store, one to buy some flowers, when his companion intimated that flowers would be about the last thing he would spend money for. There may be a good many who may perhaps have those sentiments, but this is the only instance in my life in which I have heard it expressed in words.

That the love of flowers is not a fad or fashion merely, but an inborn feeling, I have some strong proof of. A few years

ago when visiting the gold mining regions in Alaska I found many of the miners, far away from, and after many years' absence from civilization taking the greatest pride in showing a visitor some flowers they had managed to raise; perhaps only a few Nasturtians or Sweet Peas, and they seemed to be prouder over this than any other of their accomplishments. Why? Because of the inborn love of flowers and because of the tender memories and recollections they awakened.

Therefore, I say again, there is no one thing which will help make more truly a home than a few flowers about the house. And when we consider the small cost and the little trouble in raising them about the house and on the farm, I do not understand why they are so very rare about the farmhouse, especially as so many of our farmers are folks from other countries where flowers are always associated with the farm home, even the poorest, most humble cottage will be surrounded with them. I take it that the reason must be, in many instances, that they have been tried but met with failure, because of not choosing the right kinds, or improper handling of the seeds or plants. Now, this is something I firmly believe the rural school teacher should take care of. He or she whichever it may be, ought to know enough of the rudiments of horticulture to be able to, and should be required to teach the children how to raise some of the commoner kinds of flowers from seeds, not only in theory, but by practical demonstrations. The school grounds in the country should be gardens with a wealth of flowers, and the time will come when this will be so, but let us all help every-

one in this one way to bring this about, especially you member Horticulturist. We ought to feel it our sacred duty to preach the Gospel—Grow some flowers in your garden—if you have no garden, make one. The sooner we can have it so the better and we will all be better people, living in a better land.

History of Princeps.

In response to our request for some information on the parentage of *Princeps*, Dr. Van Fleet has kindly furnished us with the following:

Gladiolus Cruentus has round, widely-opened blooms about 2 inches across when fully developed, bright blood-red in color, with broad white markings in the throat, particularly at the bases of the lower petals or perianth divisions. It grows 2 or more feet high, with broad, handsome foliage, with a characteristic droop to the tips of the leaves. It is usually short-lived under cultivation, thriving best in well-drained peaty soils.

Mrs. Beecher, the pollen parent of *G. Princeps*, I understand, is one of the original *Childsi* varieties grown by the late Herr Max Leichtlin, of Baden Baden, Germany—from seed of *G. Saundersi* pollinated with a superior *Gandavensis* variety. Plants of *Mrs. Beecher* grow over 4 feet high with long, straight spikes of widely-opened blooms often 5 inches across. The color, though disposed very much in the manner of *G. Cruentus*, is rather dull crimson with speckled white throat.

Owing to the similarity of color pattern

American Gladiolus Society.

ORGANIZED MAY, 1910.

President.....	Montague Chamberlain, Boston, Mass.
Vice-President	George Woodruff, Independence, Iowa
Treasurer.....	Carl Cropp, 31 W. Randolph St., Chicago, Ill.
Secretary.....	L. Merton Gage, Wellesley, Mass.

EXECUTIVE COMMITTEE.

I. S. Hendrickson, Alex Henderson, Mrs. A. H. Austin.

COMMITTEE ON NOMENCLATURE AND REGISTRATION.

Prof. A. C. Beal, Leonard Joerg, I. S. Hendrickson.

MEMBERSHIP COMMITTEE.

Arthur Cowee, H. E. Meader, S. E. Spencer.

EXHIBITION COMMITTEE.

H. Youell, J. L. Moore, Clark W. Brown.

PRESS AND BULLETIN COMMITTEE.

H. Youell, Madison Cooper, L. Merton Gage.

of the two varieties I made many pollinations in 1895 of *Cruentus* with *Mrs. Beecher* and 72 seedlings resulted, blooming in 1896-7. *Princeps* was the most vigorous and in some respects the most attractive and was so named by Herr Leichtlin, who introduced it to the Botanic Gardens of Europe in succeeding years, on account of its great international value and wide general recognition. I have since made many hundreds of crosses of *Cruentus*, which is a very shy seeder, with the best procurable species and varieties, resulting in some exceedingly handsome hybrids, but have found few worthy to send out as companions of *Princeps*.

The stock of *Princeps* was sold in 1902 to Vaughan's Seed Store for \$1,000—a record price at the time but since greatly exceeded for the stocks of successful novelties—and introduced by them the succeeding year.

Princeps has probably the most extensive list of high awards from representative horticultural societies ever achieved by a Gladiolus variety and is still frequently exhibited and commented on in home and foreign gardening periodicals.

W. VAN FLEET.

Primulinus and *Baron Hulot* harmonize beautifully. Try them.

One of our subscribers wants to know where he can secure the Gladiolus species *Alatus*. He wants to do some hybridizing with it. We are not familiar with this species, and any one who knows about it or where it can be had in either large or small quantities would confer a favor by advising us.

Deep planting, (4 inches to 6 inches according to size) combined with deep plowing before planting, helps greatly in resisting drought.

WANTED

To interest some northern Gladiolus growers to assist us in organizing a company to grow Gladioli on a large scale where there can be good money made from cut blooms in May and June by shipping to northern cities, and where first class bulbs can be produced at a less cost than in the north and can be harvested without any danger from early winter catching them still undug.

We have grown Gladioli in the south for over 12 years and know the possibilities.

Will be glad to hear from anyone who is willing to invest capital in developing this industry on a scale that will mean a wholesale business worth while. We will have over 75,000 bulbs planted this year and bulblets enough to produce a quarter of a million more.

L. H. READ & CO., Deer Park, Ala.

“Your magazine is the best medium I have ever advertised in. We have had an unusual number of calls for catalogue and made a large number of sales through its columns.”

--A. E. KUNDERD.

THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.
Published Monthly by Madison Cooper, Calcium, New York.

Vol. I.

JUNE, 1914

No. 6



GLADIOLUS—"PEACE."
(For description see next page.)

Gladiolus—"Peace."

[Subject of illustration on our front cover page.]

This variety is not only new and distinct and of more than special merit otherwise, but it also has wonderful vitality, making it desirable for many situations and conditions. It has secured a prominent place both at home and abroad and has already become a standard variety.

The plant is striking and attractive, and its broad heavy foliage of a deep green and its erect and vigorous habit of growth, prove its strong constitution and vigor which are rare in the lighter colored hybrids. These qualities are also further proven by its exceptional reproductive powers, resulting in a large number of offsets and divisions.

Its gigantic flowers are borne on tall spikes often attaining a height of 5 ft., and the entire plant shows a vigorous, healthy constitution. The wide open flowers are of a glistening white, rather tending to a bluish tinge and with an attractive narrow stripe of purplish carmine through the center of the lower petals. If planted to bloom in September during the cooler nights and with less sunlight, the flowers are almost pure white. It has been said that *Peace* is well named on account of its peaceful expression.

It is a good forcer and will, doubtless, be used largely as a forcing variety when florists become better acquainted with the possibilities of the Gladiolus for this purpose.

Peace is a medium to late bloomer, and when planted with other stock is in its best condition when most other varieties have passed their blooming period. It is, therefore, of exceptional value to the florist when there are few other light colored flowers in bloom.

Mrs. Francis King, the noted writer on floral topics, in her description of this flower says:—"It is impossible to overpraise the cool elegance of Gladiolus *Peace*. Its flowers are milky white (color chart Blanc de Lait No. 1) with well defined narrow strips on the lower petals, far back in the throat, of rosy magenta (rougeatre No. 1).

"This variety is unsurpassed for cutting, as the flowers keep well in water and buds will open the entire length of the spike. *Peace* is surely the noblest white Gladiolus. Its large flower, the slender violet markings, so well within the throat that there is hardly an effect of color, gives one the impression of a pure white spike of bloom, which had once looked upon an evening sky."

Garden Club of Alma, Mich.

TO THE EDITOR:—

That the readers of THE MODERN GLADIOLUS GROWER may think of Alma as something more than a mere black dot on the map of Michigan, I wish to tell you that it is a thriving little city of 3,000 souls, with the picturesque Pine threading its way through the limits.

We are blessed with many good Providences to which a city of this size is heir, and in addition -(and now comes the point of my story)—Alma is the home of a well organized "Garden Club" of sixty members—each an enthusiastic flower grower. We recently received a shipment of 1,000 Gladiolus bulbs of the varieties *Mrs. Francis King* and *America*, while the scattering orders including *Niagara*, *Badenia*, *Dawn*, *Peace*, *Princeps* and *Chicago White* mount up to nearly one hundred. For the benefit of all amateur gardeners, allow me to quote from my own paper on Gladiolus culture, read before the Garden Club.

"Tis the glory of my garden

Thru many summer days—

So cultivate Gladioli,

It pays! It pays!! It pays!!!"

Do visit us during blooming time!

MRS. E. L. SMITH,

Chairman "Gladiolus Group,"

Garden Club of Alma.

(By request of our Pres., Mrs. Francis King.)

American Gladiolus Society.

The Nomenclature Committee has registered the following named varieties originated by Mr. Groff, and offered by Mr. Arthur Cowee, Berlin, N. Y.

Dominion	Lavandula
Empire	Peachblow
Evolution Perfectus	Magnum
Papilis Rose	Display
Silver Star	Passport
London	Excelsa

A. C. BEAL, Chairman.

Named vs. Mixed Varieties.

Amateur growers need not be in too much of a hurry to begin growing named varieties. It is better to start with some of the good mixtures, and in fact several good mixtures, than with only a few perhaps of the higher priced named varieties. Advanced growers may argue against this, but there is always a chance for a difference of opinion. Grow mixtures first.

Breeding Gladioli Scientifically.

BY W. W. WILMORE, JR.

THE subject of breeding Gladioli has often been treated, but in a somewhat indifferent manner. We have learned that by sowing the seed of the Gladiolus we obtain a seedling which differs from the parent plant, sometimes but little, but generally a great deal. We also know that the products of two parents can be brought together in one by the crossing or pollinating of nature by the wind and insects, and by the hand pollenization of man. But do we go about this work in a scientific manner? Do we not cross each and every variety which has a promise of something new? Do we not sow seed of varieties which nature has crossed from inferior varieties which are far below the standard? Here, dear friend, is where many of us make our mistakes.

There are a few undeniable facts in nature which must be taken into account and be used as our guardian angel:

First—As a rule all undesirable plants that are inferior varieties of any particular species, are overly productive.

Second—Those of average productive* powers are those we term standard varieties.

Third—Those of extreme novelties, difficult crosses of extraordinary size, colors, growth, or in fact any characteristic which is peculiar to the species are shy producers, and sometimes Heterosaggets.

We now wonder why these things are true. Why do our poorer varieties produce heavier than our best ones or those mentioned in class three? Take for instance, the beautiful mixture you once had with so many fine varieties in it at one time. Look at it now; it has become almost one variety and that one the very poorest one of the lot. Where have the choice ones gone? It has become a common opinion that different varieties when grown together sooner or later become one color, by those who have not given the matter much thought. This is not true, although we have reason to believe it from what we see. It is only the over-productiveness of the one variety which survives the lives of others.

We infer from these facts that nature has given life a point from which to rotate, let us call this point the center. All life below this point is of inferior quality and overly productive, while life above

this point comprises exceptional specimens of superior quality, and are non-productive and heterosagget. At or near the center, life is more evenly developed, we have beauty, grace, productiveness, and, in fact, every desirable quality. These we have mentioned in a previous paragraph.

To prove these points it is necessary to illustrate: We will first take human life; animal and plant life is governed by the same law. How many great men have reproduced themselves, or any likeness unto themselves? Absolutely none. From whence do the undesirables come, from the central or upper classes, or from the class we term below center? What class of humans hold the entire race together? Certainly no other than the central class. What class of the homogeneous? Only one, and that the center.

Coming nearer to our subject, where do our best varieties of Gladioli come from; are they offsprings of varieties of superior breeding, or inferior quality or from parents near our central point? Let us take, for example, the variety *Princeps*, if I mistake not, it is a variety of extreme merit obtained by a difficult cross. Is it capable of reproducing itself—that is, produce a seedling as good as itself? I doubt very much if its pollen will even fertilize or cross with another variety on the central point. I have never seen a pod of seed form on the matured stalk of this variety, and I have failed to pollinate any variety by using its pollen. It is a male that is unfertile in seed production, at least in Colorado.

This feature is quite noticeable in Gladioli of the large flowered types. Many varieties bear little if any seed, and some that do produce seed unfertile, which will not germinate. I once crossed the species *G. Nanus* with the well known *America* of the *Gandavensis* type. I secured several beautiful pods of seed, and expected a cross that would prove of great value. I obtained the cross by great labor, growing both varieties in cold frames so as to bloom them at the same time, sowing the seeds in flats in the greenhouse with some other crosses so as to give them the best of attention. Time passed and the common crosses made an appearance, but not the cross of the *Nanus* and *America*. Ninety days went by and still no germination took place; I then investigated the seed and found

*When speaking of productiveness, I refer to both seeds and off-sets.

some had rotted, others were in seemingly good condition but none of them ever sprouted. The reason for this is that I had gone too far from my parent for its mate, and although I secured seed they were not fertile, and I had my experience as a teacher.

To be successful we must keep near the central point and breed from it alone. We may reach out from it to secure our mates or parents, but should never use the central figure to pollinate an outside variety. It may be confusing to determine a variety near the center, but the following rule will be found almost reliable and act as a guide: Any variety bearing seed of its own pollen which will produce a number of likenesses to itself, we may term a central figure. Several years ago when *America* was first offered to the trade we secured several and planted them by themselves. It was such a beauty to us then that the seed was saved and planted. About 90% of the seedlings were so near like the parent that they could be at once recognized as being offsprings of the parent. One dark color only made an appearance, it was a brick red; one lavender, the most beautiful shade I have ever seen in a *Gladiolus*; and two pure white. These seedlings unfortunately were attacked by disease, and in two years were all gone. It was caused by a wet season, and as they were on low ground, stood several weeks under water.

From that time on I have used *America* as a parent, and found it to be very satisfactory. It has produced several of the best *Gladioli* in cultivation to-day, and has a prospect of many more. It is, if I mistake not, a chance seedling, one of nature's productions. Many of us have spent years of time breeding the *Gladiolus* too far from the center to be successful, and our expectations have been blasted in the end and bitter disappointment has discouraged many who might have produced wonderful varieties if they had known their mistake. This may account for some of the inferior varieties on the market today.

When one has spent several years of time originating varieties of poor quality it is only natural that he should name his best and send them out as a reward for his labor. But in the near future we expect to see many old and inferior varieties drop from the lists and newer and better ones to take their places. To secure these new sorts and avoid creating inferior varieties as our best work, it is necessary that we change our modes and methods of production and introduction.

Too much has been said in regard to

cross breeding by others to make it necessary for me to describe it here although I might add a few suggestions on pollinating which might make it easier to handle. When crossing two varieties my instruments are a small, artist's camel hair brush, some six inch square pieces of cheese cloth, and some rubber bands. The brush is filled with the ripe pollen from one plant and is carried to the plant which is to be fertilized. The flower is uncovered and the brush is applied to the stigma which should be ready to receive pollen. The bloom is again covered by a square of cloth and the rubber band is put on to hold the cloth in place and to draw the loose edges together to prevent insects from entering. When pollinating, the blooms to be used should be covered upon opening, after first pinching out the anthers to prevent self-pollenization. Cloths can be removed after the flower begins to fade and be used again on some other one, which is much easier than covering the entire spike.

In selecting a parent stalk, care should be taken to secure a strong healthy plant and when the first blooms open the upper half of the spike should be cut off. This enables the plant to produce stronger seeds and fuller pods.

It is suggested to amateurs who are planting *Gladioli* for the first time or those who are growing in a comparatively small way, that to get the best effect and have continuous bloom from one end of the season to the other, that at least several hundred blooming size bulbs should be planted. They should be planted at intervals of two or three weeks, beginning as soon as the ground can be worked in the spring and ending about July 4th. If the varieties planted are of the average, some early, some medium and some late, bloom will be had from about the time of the last planting through until frost kills the flower buds. Those first planted of the early varieties, will perhaps bloom before July 1st. It depends on location, season, etc. The above suggestion applies to the latitude of New York State.

It will bear repeating that those who are keeping their copies of THE MODERN GLADIOLUS GROWER as issued, will, at the end of the year when they secure the index which will be furnished without charge, have available a little encyclopedia of practical information on the planting, culture and breeding of the *Gladiolus*.

MRS. AUSTIN'S TALKS FOR AMATEURS.

No. 5.—GLADIOLI AND HARDY PLANTS.

It is only too true. We have neglected the Gladioli lately. It never would have happened if those pæonies and irises had not been between the house and Gladioli. We simply could not pass them by.

Umbellata Rosea, the beautiful waif, with many nods and bows announced that the pæony season had opened and did it with a sweet grace that was irresistible.

We are not so well acquainted with pæonies as we are with Gladioli, and sometimes feel a little embarrassed in their presence, and *Umbellata Rosea* reminded us not a little of a group of roguish Geisha girls inviting people to sip tea in their tea rooms, and slyly poking fun at the stout American, awkwardly arising from the floor mat.

Edulis Superba, handsome and dignified, grave with responsibility as master of Decoration Day duties.

Festiva Maxima, a strong ally of *Edulis Superba* in the decoration of soldiers' graves, and wearing blood-drops over her snowy heart "lest we forget."

Marechal Valliant, the great drum major of pæonydom pompously marking the time.

Couronne de Or, adjusting her "crown of gold" preparatory to stately entrance into this royal procession passing before our eyes.

And over there a little way, the Irises, in dainty silken gowns, throwing kisses with their finger tips. Butterflies lazily floating in the air, gorgeous-hued humming birds darting near us unafraid, sipping nectar from the *Columbines*.

The orioles in their baskets on branch tips of glorious elms, seem softly singing:

"Let the world ebb, let the world go,
Swinging, swinging, to and fro."

Drowsy hum of bees—rustling foliage—fragrant odors everywhere.

With the soft, soothing nature sounds, sorrows and trials are forgotten, and a perfect harmony lulls us into the dream-land of June.

Pæonies and irises are desirable crops to grow as sidelines in connection with Gladioli, as they start into growth so early, and while we are preparing the soil and getting our stock of Gladioli planted, they are sturdily advancing and throwing out their buds, and almost before we know it, we have a crop of blooms.

As most of the main field plantings of Gladiolus bulbs are in the ground by this time, we can easily take care of the cut (blooms) of pæonies and irises.

While calling in early spring on a couple of busy dressmakers who are enthusiastic lovers of flowers, they delightedly showed us their first bouquet of the season, and announced gleefully that they would now have quantities of fresh flowers from their own tiny garden every day until November. For two extremely busy women to have a profusion of fresh flowers daily from early spring until November from a small garden that cannot be given a great amount of care, would certainly necessitate a wise selection and careful arrangement.

It would seem that hardy plants supplemented by summer flowering bulbs would be the easiest and most satisfactory, and surely the Gladiolus with its great range of color, the successions of bloom one may have, and small amount of labor required to bring them to perfection, would be the most useful of all summer flowers in a garden of this kind. It is a little late to talk about setting out plants, but never too late to plan for them, and when they are in bloom is the best time to make selections of the varieties we wish for next season, so we are planning to visit different gardens and see how some of those longed for varieties behave at home. The grower always interested and willing to talk of his pets will give much timely advice.

But we are not yet through with Gladiolus planting, so with some misgivings as to the result of our slight neglect, we go to the field and are joyously welcomed with a rustling "don't mention it" in reply to our apologies, and it seems as if they had put forth special effort to overcome any hindrance to their growth, for they are now well up and the early varieties hinting of coming bloom. We cultivate them carefully and going over the field pull out any stray weeds that may have been overlooked, and give the entire plot a general "setting to rights."

We must not allow the soil to become baked and thus it is important to cultivate after each rain, and work the soil, breaking it well in between the bulbs and bulblets, being careful not to injure the growth.

We look the bulbs over that are still in storage and arrange for a planting about the middle of the month, also selecting some of the largest to plant the last of June for extra late blooms.

MRS. A. H. AUSTIN.



Outdoor exhibit of the Gladiolus *Peace* by Arthur Cowee, Berlin, N. Y., on the state armory grounds at Minneapolis, Minn., during the convention of the Society of American Florists and Ornamental Horticulturists, August 19-23, 1913.

"Peace" at Minneapolis.

The Society of American Florists and Ornamental Horticulturists, in connection with its annual Convention and Trade Exhibit, held in Minneapolis August 19th to 23rd, inclusive, arranged for an outdoor plant exhibit, which was really a good sized garden, planted in all kinds of bedding plants, shrubs, evergreens, perennials, water plants, etc. The planting was done in May and June and all plants were in prime condition of health and cultivation at the time of the Convention. The entire garden space, about one acre in extent, was taken by growers from all parts of the country who paid a nominal charge per square foot for space, to cover the expense of planting and maintenance for the entire season.

Eight of the largest beds were planted in Gladioli, for which 14,000 bulbs were required. The bulbs were planted about the middle of May. There were altogether about 75 varieties displayed, all of which were grown to perfection and formed one of the main attractions of the entire garden.

This was the first Convention Garden the Society of American Florists and Ornamental Horticulturists has arranged, and no prizes were offered for the exhibits. It is therefore very much to the

credit of all the many exhibitors to have given this undertaking such splendid support, without the inducements generally offered at Trade Exhibits, Flower Shows and similar occasions.

One of the best Gladioli shown was *Peace* exhibited by Arthur Cowee. His bulbs were received early and were planted May 3rd. They were splendid, strong, healthy bulbs and produced excellent strong plants. They were about 4' 6" high. The flower is a beautiful white, well placed on a heavy, strong and long spike, with often as many as 15 perfect flowers on one spike. The entire bed was really at its best about the last of August. It is not an early bloomer, and is in its glory when most Gladioli have passed. *Peace* was really the gem of the Gladioli in the garden and attracted a great deal of attention from professionals and amateurs alike.

THEODORE WIRTH.

Garden Clubs.

The communication of Mrs. E. L. Smith in another column, is interesting, and the Garden Club idea is worthy of emulation in hundreds of villages and cities. May the "Gladiolus group" be the most enthusiastic of any group in the Club, and may their number and enthusiasm forever increase. Start one in your town.

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
PUBLISHED MONTHLY ON THE FIRST OF THE MONTH BY
MADISON COOPER, CALCIUM, N.Y.

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OUR MOTTO:
Special favors to none, and a square deal to all.

Canadian and Foreign
Subscription Price
75c. per year

Growers are invited to contribute articles or notes over their own signatures, but the Editor reserves the right to reject anything which in his judgment is not conducive to the general welfare of the business.

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Vol. I.

June, 1914

No. 6

A Universal Advertisement.

Good morning. Have you used Pears' soap? There! I did not mean to ask that question, the words just slipped from my lips unconsciously, for, after reading them hundreds of times, they have made such an impression that with the morning greeting, I *think* them if I do not *say* them.

Many advertisements make strong impressions. With my cereal I have the feeling that there is an aristocratic looking colored chef nearby anxious to serve more, and am inclined to overeat.

I enjoy reading good advertisements and believe that I have layers of them stamped on my brain which I wear in a sort of an old fashioned circle-comb style.

Such is the power of repetition. This brings the thought that perhaps something of the kind might be used to advertise Gladioli. The modern varieties are so beautiful and yet practically unknown, it seems as though we should try to call public attention to them by doing something unusual.

Would it not be a good plan to select some short motto, or question, that, perhaps by constant repetition, would excite interest? I will suggest one so that you will catch the idea:

Are You Growing Gladioli?

If professionals, amateurs, and all Gladiolus lovers would join in one great movement to *Boom the Gladiolus*, I believe the demand for them would more than fill the vases of the world.

With this motto (or a better one):

Are You Growing Gladioli?—on your letterheads.

Are You Growing Gladioli?—on your cards.

Are You Growing Gladioli?—on your lists.

Are You Growing Gladioli?—in your *own* business ads.

Are You Growing Gladioli?—(the motto only) in leading publications that would reach the eye of the general public, and make it so universal that it would become so common an expression that children could not even look at the rainbow without the question,

ARE YOU GROWING GLADIOLI?

dancing before their eyes.

Most people's bump of inquisitiveness is fairly well developed, and I venture to say that thousands would begin Growing Gladioli out of pure curiosity, and who can grow them once without growing them forever? MRS. A. H. AUSTIN.

Breeding Gladioli Scientifically.

The point that Mr. Wilmore makes in his article under the above title, that it is to the central class that improvement in breeding Gladioli must be looked for, is a very interesting one. His reference to the human family is especially pertinent. It is a well known fact that it is the substantial middle class people that control in the long run, and that it is on this class that all stability in human affairs is dependent. Mr. Wilmore certainly offers some very valuable suggestions, and plant breeders will do well to consider carefully what he has to say. MADISON COOPER.

One of our subscribers in the West states that under his cultivation and soil conditions, that *Rochester White* and *White Lady* are very different as to plant characteristics, although no difference is seen in the flower. Cultural conditions as well as climatic and soil conditions have a vast influence on vegetable growth, and in other localities the result might be quite different. We will be glad to hear from others on this point of similarity, and with reference to other varieties as well as those mentioned above.

Mrs. Austin's Advertising Suggestion.

There was a time when it was understood that competition was the life of the trade, but now we know that competition is not the life of the trade, but rather in most cases, the death of the trade, and that the real life of trade is advertising and coöperation. Properly done, advertising will accomplish most any reasonable result that is possible to accomplish. There is nothing about advertising rightly done, which is not dignified and business-like, and in every way fair and legitimate. In past years some people have formed the impression that a person who advertised extensively was inclined to be "cheap." Now, we know that the man who does not advertise will certainly become cheap if he has a good, husky competitor who knows how to advertise.

Mrs. Austin's suggestion can be elaborated upon or possibly a better phrase than *Are You Growing Gladioli?* could be adopted, but if there is a better phrase it does not occur to us at the moment. This suggestion should be taken up by the organized bodies who are interested in popularizing the Gladiolus and introducing it to new growers, and it should be taken up by every person in the world who is now growing the Gladiolus. If some such phrase is adopted, it would have an influence and power for good which would be hard to estimate. We give the idea our unqualified endorsement and are willing to start the matter if the suggestion meets with approval. We ask that every grower write to the editor his opinion of the scheme as proposed.

MADISON COOPER.

"The Best" Gladiolus.

THE MODERN GLADIOLUS GROWER should not be criticised for not attempting to decide on points of excellence of one variety over another. This question can never be settled, and therefore, we as a disinterested party, must not be expected to even take sides in connection with the matter. What one person would consider a pre-eminent quality for the best white, or the best red, or the best pink, or the best yellow, by another person would not be considered as important, and therefore, the question of what constitutes *the best* is indeterminate and always will be. One variety might take the premium for the best of its color at a show this year, and next year perhaps an older variety might take the premium. It is largely dependent on the ideals of the judges, and doubtless, other things as well, influence the judges at the time of making their decision.

Be it known, therefore, that THE MODERN GLADIOLUS GROWER does not assume to be judge, and according to our motto, which we will strictly adhere to, everyone will have an equal show, and opinions fairly and honestly expressed will always find a place in our columns.

WAYSIDE RAMBLINGS.

A QUESTION OF PRONUNCIATION.

As long as the Massachusetts Horticultural Society fills out a card for an exhibit "Gratuity of \$5.00 for display of *Gladiolus*," we cannot expect the average gardener to distinguish correctly between singular and plural, but is it not strange that florists and experts in botanical nomenclature who can talk glibly about scores of rare plants with long Latin names should invariably blunder over the correct name of an old and familiar garden bulb, the *Gladiolus*? Mention *Gladioli* to anyone in the florist business and he stares at you a bit and then corrects you gently with "Oh! You mean *Gladiolas*." And so it goes among the dealers "*Gladiolas*" and the public catches the name from the salesman and passes along a word not found in any standard dictionary or botany.

Among growers of *Gladioli* there is a diversity of opinion as to the pronunciation, and the dictionaries allow *Glad-i-6-lus* but it seems to me an awkward change to jump from that to the plural *Gla-di-o-li*.

It is much more uniform and agreeable to put the accent in both cases on the second syllable *GLA-DI-O-LUS*, plural, *GLA-DI-O-LI*.

Why do salesmen talk about "*Gladiolas*" when catalogues, circulars, etc., are all printed correctly "*Gladioli*?" These men are supposed to know and their carelessness in this particular seems to be without excuse.

I congratulate THE MODERN GLADIOLUS GROWER and its editor on the remarkable success of the first few months of its existence and hope it will "live long and prosper" till at length the great flower loving public may become familiar with the correct name of the most popular summer flower, the *GLA-DI-O-LUS*.

S. E. SPENCER.

POISONOUS ELEMENT IN GLADIOLUS SEED—
DEPTH OF PLANTING.

While planting today, the article by F. S. Morton in last "GROWER" recurred to my mind, and while, from some points of view, and with some people his advice to rub out the little round central seed from the winged appendages attached to it, may be good, yet I know from rather painful experience that it should, by some persons, be disregarded. There is an acrid, poisonous oil in the *Gladiolus* plant, mostly concentrated in the seeds when ripe, very

similar in its character and effects to that of the common Poison Ivy, (*Rhus Toxicodendron*) and producing a very similar and equally painful, though rather more turgid but less eruptive inflammatory swelling. I gained my knowledge through a painful experience more than a score of years ago, and one experience was quite sufficient. There does not seem to be any reason for rubbing out the seed, other, than to be sure of planting only sound, plump seed, and the same end may be attained in other ways, e. g. by gently winnowing the seed that needs grading, or by planting more thickly in the row. At any rate, those susceptible to the poison of Ivy should beware of the like poison of the *Gladiolus*.

Perhaps I might dissent from the advice to cover the seed "from one to two inches deep." Certainly two inches under ground is not nature's way of doing. I know the seed will germinate perfectly well without any covering whatever, if kept moist, and often find a pod of seed that has lain on top of the ground through the winter growing beautifully in early spring. When the seed bed is covered with burlaps and kept from drying by one, two or three sprinklings a day, I am sure that from one-fourth to one-half inch is better than deeper.

WILBUR A. CHRISTY.

GLADIOLUS "ALATUS."

TO THE EDITOR:—

I note your inquiry on page 80, May issue, for information concerning *Gladiolus Alatus*. This species is native to Southern Transvaal, S. Africa, and I am informed, is usually found growing sparsely on stony slopes. It was early introduced to European cultivation having first flowered in England in 1795 and is still sparingly grown in frames, cool green-houses and protected rockeries. It is rare in commerce but is still offered at very moderate prices by such bulb growers as C. G. Van Tubergen, Jr. and E. H. Krelage & Son, both of Haarlem, Holland. The corms are small, soft and have very thin coatings. They should be secured and planted in pots or frames by September as they soon perish if allowed to start growth out of the soil. The blooming season is naturally about February and they are best flowered under glass, but may sometimes be kept over winter by planting eight inches or more deep as late in fall as possible, covering them with sand and with a sash or frame at the approach of freezing weather. The plant grows about a foot high, with

two or more strongly ribbed leaves and a spike of 6 to 10 handsome, brick red and yellow flowers, almost two inches across. It has been considerably used by breeders of the winter flowering or forcing Gladioli, the variety *Expreis*, *G. Alatus* x *G. Cuspidatus*, rose colored with brown markings, being best known.

I have many hybrids of it with *G. Primulinus*, the best being of *Alatus* type and varying in color from deep salmon to yellow. All bloom in winter and are treated as pot plants, being started into growth in September and dried off in April. When *Alatus* is crossed with summer blooming Gladioli, the hybrids seem to lose all attractive characters.

W. VAN FLEET.

INSECT DAMAGE—FLOWER SPIKE FROM NO. 2 BULB.

TO THE EDITOR:—

I have had a curious experience with my *Klondykes*, and would like to know if it is common in other localities. I have grown this variety for six years, and from the first have noticed that as soon as the first flower commenced to open, there were cut from the edge of the petals, semi-circular sections, perhaps $\frac{1}{4}$ to $\frac{1}{3}$ of an inch in length. My father says it is the work of the "tailor bee," which lines its nest with these soft bits. What puzzles me is the fact that of all the varieties, *Klondyke* is the only one they seem to work on. I had quite a number of yellow seedlings, which were not disturbed, nor have they troubled other light ones. I had several hundred *Klondykes* last summer, and it was difficult to cut a half dozen good spikes at once, for that reason. Can you tell me what to do for them, to free them from this pest?

Regarding the article in the May number by A. H. Austin Co., I note that it states that the average No. 2 bulb will not produce a full size flower spike. I want to state that last spring I obtained several hundred tiny bulbs of *Niagara* from Mr. Matthew Crawford, the largest of which was no larger than the end of my forefinger, and to my astonishment I had dozens, yes scores of marvelous blossoms; spikes up to my shoulder, and the blossoms larger than almost any other, certainly larger than my *Princeps* and equaling in size my finest *Mrs. King*. The wonderfully recurved petals of this flower, and the flexibility of the spike stem makes it unusually graceful for decoration. I arranged a sheaf of a dozen of these with ferns for a funeral, and

they draped over the edge of the casket as effectively as lilies.

One thing further: What is the difference between *Princeps* and *Princepine*? I have never seen the latter listed until I've had your little magazine. I notice you state on the cover page of May issue that the *Princeps* is of rugged "constitution." I do not find it so, having lost my start three times now; it is beautiful! How I love the beauties. C. A. D.

Note by the Editor:—We hope that any of our readers who can give information on how to combat the pest causing the damage described in the first paragraph above will write fully if there is any remedy possible.

ENTHUSING THE AMATEUR.

With regard to enthusing amateurs, seems to me (a very amateurish amateur) that S. E. Spencer's suggestion on page 25 is one of the best. I don't believe there is anything else that will appeal so strongly, to the amateur, as a colored plate made as true to nature as possible, except of course the flowers themselves.

The suggestion by Mr. J. Coleman on page 41 is good, only it does not go quite far enough. If growers sent cut flowers to their state fairs only, some state fairs might have a superabundance and other state fairs none at all, and doubtless you wish to reach the people in the states which as yet have no professional growers. Since the cut flowers are such good travelers might not some of the big firms send to other than their own state?

ALICE H. BYRD.

Those who are growing Gladioli for the first time this year and who perhaps have purchased the small bulbs, known as "Blooming Size" must remember that the small bulbs, generally speaking, will come into bloom later than the larger ones and will not produce as large a spike of flowers. These small bulbs the second year, with proper culture, will produce a much larger bulb which will give a much larger spike of bloom and come into bloom in a much shorter period from time of planting.

The great meeting of the Society of American Florists and Ornamental Horticulturists in Boston in August, is made the occasion also for the meeting of many societies devoted to some special flower. The American Gladiolus Society will hold their annual meeting during the Boston Show, and the regular Gladiolus exhibition will be held. Prize list and announcement will be made later.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

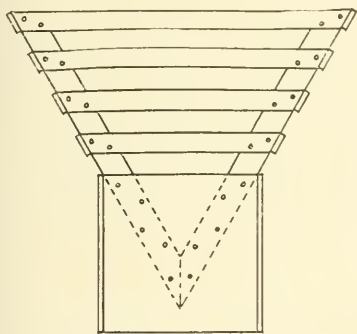
Selling Cut Flowers—Prices—Shipping Packages, etc.

TO THE EDITOR:—

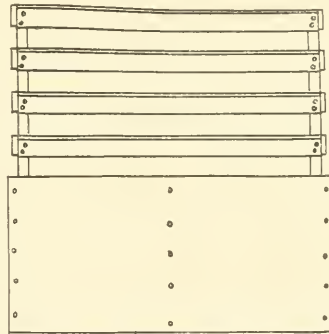
Can you give me information through your columns in regard to selling cut Gladioli? I would like to know particularly number of spikes to put in a bunch, how to handle them or pack for shipment and price to charge. I am a new beginner, and there are no cut Gladioli sold in this town. I refer, of course, to outdoor grown flowers. I am very much pleased with THE MODERN GLADIOLUS GROWER, and find it full of information. F. O. G.

Answer:—Since it is a fact that there cannot be genuine pleasure in a pursuit if

Early in the morning while the dew is yet on, we go through the field cutting the spikes with the unfolding of the first flower. A slant cut is made, being careful to leave at least two pairs of leaves to mature the bulb. Should extremely long spikes be demanded by your customer a proportionately higher price must be charged, for by cutting close to the ground the bulb is rendered worthless for future planting. The next step is to place the flowers in buckets or jars of water in a darkened cellar, to give them a drink before shipping in the late afternoon. By shipping rather late in the day and to



End



Side

Orange crate fitted with lath for shipping cut Gladioli.

carried on to any extent without some profit, we feel like going into detail regarding the marketing of Gladiolus spikes. One may be an amateur full of love for the Gladiolus, now content with planting a few dozen corms, but, on the other hand, would not the joy be many times increased with the unfolding beauty of several hundred or more spikes, if a market be sought whereby a profit could be had? It is a small village indeed that will not take sufficient numbers of flowers to net a tidy sum; then there are the further possibilities of shipping to nearby cities.

points not over ten to twelve hours distant, the flowers will arrive in the best possible condition the following morning having the coolness of the night in which to travel.

There are several styles of packages in which the flower spikes may successfully be shipped. Empty orange boxes make a very good crate with some remodeling. Two quite substantial strips are nailed on the inside of the ends at an angle of 30 degrees; these strips to be as long as the desired height of the crate thus forming a "Y" shaped flare to allow the flowers ample room. The entire part of the

crate above the orange box, top and sides is stripped with lath with two inch open spaces between, and on account of the cost it is necessary that the empty crates be returned. The return charges amount to not over ten cents on a single crate. For shipment, the spikes are placed in an upright position after being tied in bunches of two dozen, blossoms toward the center, with a few extras added, should any be damaged in transit. The writer wraps the stems of each bunch with liberal quantities of dampened newspaper, thus packing securely in the crate so as to not admit of jostling. Crates as above described were used in shipping exhibition blooms to the state fair last season, only each bunch was placed in a securely fastened quart tin can partly filled with water. This method would be ideal in shipping flowers to market were it not that the additional weight means added express charges. Likely in most cases particularly in severely hot weather such an added expense would be offset by having the shipment reach the market in the freshest possible condition. Another method of packing is to tie the spikes in small bunches and pack in layers in corrugated boxes. To pack in this manner the flowers must be cut when first showing color, and is not advised except for long distances. Tall candy buckets can be utilized, putting a little water in the bottom. By a little experimenting the grower will adopt a method best suited to his needs in shipping.

"Price to charge." That is a question. Roughly speaking the market price of spikes range from two to six dollars per hundred during the season. If shipping to the Wholesale Commission Florists of the large cities the returns will fluctuate considerably owing to the supply and demand. In the middle of the season when all kinds of flowers are plentiful, there sometimes is an oversupply on the market and the returns may be disappointing. It is a pretty safe proposition that flowers grown in a proper manner and marketed likewise will command a fair price, while inferior stuff goes to the "scrap heap." It is good judgment to play for the early and late business; make a liberal planting as early as the ground can be worked and another as late as possible near July first in this latitude. The "glut" of the market will then be avoided and the highest price for your product realized.

Just a word to the beginner. Do not be afraid to plant liberally of a number of varieties. When your townspeople learn that you will sell a dozen spikes for fifty

cents you will hardly be able to supply the demand. The Gladiolus is so satisfying, so lasting, so irresistible. They will and must have them.

JOE COLEMAN.

Distance for Planting Gladioli.

TO THE EDITOR;—

My interest in Gladioli is of many years' standing, and at the present writing I have about 10,000 flowering bulbs. These I plant at a minimum distance of 8 inches apart. They take up considerable ground and my space is limited. As your paper has given me valuable suggestions already, I will be glad to have you inform me whether I cannot plant more closely, and just how it should be done.

F. S. C.

Answer:—Your problem is one which is quite common to advanced amateurs. Most amateur growers after a few years accumulate several thousand flowering bulbs and are crowded for space when planting under directions commonly given. The method of the writer may be helpful to you.

While this method is rather crude, yet it is simple and can be adopted by anyone and no special tools or conveniences are necessary. A flat bottomed trench is made with a hoe just the width of the blade, and it should be from 4" to 6" deep, depending on the size of the bulbs to be planted. After the trench is made, throw in a half inch of loose dirt and make a planting mark with the end of the hoe handle or otherwise at each side at the bottom of the trench. If the bulbs are small, three rows may be planted in the width of the hoe blade. Bulbs may be planted with a distance of less than their own diameter between them if the bulbs are large, and at a distance of about one inch between centers if the bulbs are small. The double or triple rows planted in this way can be spaced any convenient distance apart, but preferably not less than 18" to 24". This will give ample room for cultivation, cutting of flowers, etc.

This plan of planting will save very much space over the ordinary wide spacing methods, and no serious disadvantages will be found. There are advantages in close planting in that the stalks support each other, and it saves time in digging as well as in planting. If the rows are run somewhere near north and south so that the sun will shine on both sides of the row, the foliage will get plenty of sunlight. Of course, this method requires more hand weeding than if planted in a single row. In fact, single row culture can be handled to advantage without any hand work whatever, but the loss of space will in many cases offset the saving in labor.

MADISON COOPER.

Gladiolus Types.

TO THE EDITOR:—

What are the most striking points of difference between the various classes, *Lemoinei*, *Childsi*, *Nanceianus*, *Gandavensis*, etc? The hooded flower and small stalk generally identify the first named. Are there characteristics of the others as well marked? S. F. M.

Answer:—

THE "GANDAVENSIS"

section descending from *G. psittacinus* hybridized with *G. oppositiflorus* on *G. Cardinalis*, and subsequently with many other species, is the oldest of the summer blooming garden types of Gladioli, and has been brought to great perfection by Souchet and Brunelet in France, Kelway in England, Hallock in America, and later by various Holland growers. It is characterized by a very erect, fleshy stem, capable of absorbing enough water when cut to fully develop all blooms, small but well opened blooms in one or two ranks all facing one way, and many opening at the same time in the better types, and a range of coloring running from scarlet to the purest of whites. The yellows and pinks in this class are generally dull, and there is much marbling with other coloring that is not always harmonious. *May*, *Augusta*, *Shakespeare*, *Brenchleyensis* and *Isaac Buchanan* are good representatives of this class. The pure types of *Gandavensis* are, as a rule, not particularly easy to grow in this country, and not very satisfactory either as garden or cut flowers, but the combinations with other classes have given us the finest Gladiolus varieties known. Over 3,000 *Gandavensis* varieties appear to have been named at different times.

THE "LEMOINEI"

hybrids were nearly all produced by Victor Lemoine, Nancy, France, by pollinating the species, *G. purpureo-anratus*, with the choicest varieties of *Gandavensis*. As a class the *Lemoinei* hybrids possess some of the richest and most intense shades of scarlet, crimson, purple and deep yellow, in the most dazzling combinations known, but as a rule the blooms are much hooded and the stalks thin and wiry, often incapable of absorbing sufficient water to develop the buds when cut. Some of the best of the older kinds still popular, are *Gil Blas*, *President McKinley*, *Prophetesse* and *Jane Dieulafoy*.

THE "CHILDSI"

Gladioli are the outcome of crossing the larger flowered *Gandavensis* varieties with *G. Saundersi*, a South African specie with widely open brick-red blooms. This was

the work of the late Max Leichtlin, of Baden-Baden, Germany, in the years from 1870 to 1880. After passing through various hands, they were finally put on the market by J. L. Childs about 1894. They are among the largest of all Gladioli in plant and flower and now comprise many superb varieties with a wide range of coloring from dark red to almost white. These varieties usually have very large, widely-opened blooms and are alike suitable for garden and cutting. Most of the successful novelties of the day appear to be crosses of *Childsi* and the other classes. *America*, *Mrs. Francis King* and *Princesse* all appear to gain their vigor from *Childsi* blood.

THE "NANCEIANUS"

strain put on the market by Lemoine in 1895, is the result of pollinating the various hooded *Lemoinei* hybrids of the day by *G. Saundersi*, and probably later by some of the *Childsi* race. The *Nanceianus* kinds have beautiful blooms of most intense and varied coloring, but quite often have weak and crooked stems and are not particularly easy to grow. *President Carnot* is probably the variety of this class most widely grown in America.

THE "BLUEGLADIOLI"

were also raised by Lemoine from the species *G. Papilio*, which has wine-colored blooms, underlaid with purplish blue. *Baron Joseph Hulot* is perhaps the best known of the "blue" kinds, which are not really blue, but rather violet and purple-blue in coloring.

THE "PRIMULINUS"

strain is yet undeveloped but promises to give us blooms and spikes of good size in the most intense and pure shades of yellow and orange, free from the objectionable markings that prevail in yellow varieties in the other classes. There is a lightness and grace in the *Primulinus* hybrids that will yet put the stiff-flowered arrangement of many now popular varieties out of favor.

W. VAN FLEET.

Some wonderful stories have been told recently about the profits to be obtained from growing Gladioli, both for the production of bulbs and for cut flowers. No one should undertake this work with a fictitious idea of what can be done. There will be some actual figures on the possibilities of the subject in the next issue of THE MODERN GLADIOLUS GROWER. These figures are conservative and do not indicate that anyone will get rich the first year in going into the business of raising Gladioli.

Rapid Increase of Stocks.

TO THE EDITOR:—

Am a subscriber to THE MODERN GLADIOLUS GROWER and am well pleased with it.

In the May issue there is an inquiry as to increasing of bulbs. I have found out by accident that bulbs will grow after they are cut. I wished to destroy bulbs that had poor flowers and cut them in pieces and threw them away among the shrubbery and was surprised to see later in the summer that they were growing. Last summer I cut bulbs in halves and marked them. They grew and bloomed and did not seem to mind the cutting, and when they were dug the new bulbs looked good and had more bulblets than others of the same kind in the same row. This year I am cutting in 3 and 4 pieces. I peel the bulb and each piece must have an eye and a part of the bulb that forms roots. I cut mainly rough and husky bulbs and those that are not likely to increase. This is free for all to try and report through the columns of THE MODERN GLADIOLUS GROWER, and should it prove satisfactory, maybe some large grower will remember me with a bulb of some new variety.

MRS. F. C. WARNCKE.

The Gladiolus Seed Bed.

It is already well known that a very small percentage of the varieties obtained from seed are worthy of perpetuation, the most difficult thing to secure being a vigorous, healthy bulb. For no matter how beautiful in color or form a new variety may be, if it has a weak constitution it must be destroyed, as these weak bulbs are susceptible to disease and become breeders and distributors of infection. And because of this it is of the utmost importance that seedlings should be grown under favorable conditions for healthy development.

Many growers place their Gladiolus seed bed under shade during the first year, but I think that this is wrong, for after testing both methods I am convinced that seedlings grown under shade do not produce as large or as strong corms as those grown under the open sunshine.

It is, of course, desirable to keep the seed bed covered with matting or other suitable material for two or three weeks after planting, to conserve the moisture and facilitate germination; but after the seeds have started to grow and roots are formed, the bed should have an

abundance of air and sun; also plenty of water should be added if the bed is liable to suffer from drought.

I prefer to have the soil in my bed rather sterile, because the weaker seeds will not survive long in a poor soil and much of the struggle for existence—for the survival of the fittest—is ended in the seed bed and I am thus saved the labor and bother of growing weaklings; but after the plants are well started I begin to feed them, giving them an occasional top dressing of some good commercial fertilizer, and later I apply hard-wood ashes.—L. MERTON GAGE in Bulletin No. 7, American Gladiolus Society.

One of the French floricultural papers reports new Gladioli as follows:—

Le Titan: Very large flowers, coppery salmon, washed with a darker shade and lined with purple. A handsome spike, and plant of unusual height, sometimes six or seven feet tall. The originator believes it to be the starting point of a new race of great vigor.

Mademoiselle Alice Martin: A gandasensis variety giving handsome spikes of seven to nine flowers opening at the same time. Flowers very large, rosy white, marked with mauve.

Mademoiselle Rameau: Flowers soft pink, petals wavy or frilled; produced in extremely long spikes, and, although many flowers open at once, a very good keeper.

Lutetia: A very large-flowering gandasensis; flowers five inches long, very soft salmon, delicately marked with a deeper shade, with a few red streaks in the throat, and a lower division somewhat yellowish in the center.

The Gladiolus Society of Ohio.

The annual Flower Show of the Gladiolus Society of Ohio will be held on August 7th and 8th, 1914, as fixed at the last annual meeting of the Society. Some of the florist trade journals are announcing that this flower show will be the third week in August, which is incorrect, and those who are interested will please take notice accordingly.

Next month we will print an article from Bulletin No. 4 of the American Gladiolus Society, on Gladiolus *Nanus*, which is an extremely valuable contribution to Gladiolus literature and which will be interesting and useful to those who are growing forcing varieties of Gladioli. This article, in addition to giving cultural methods and a short history of Gladiolus *Nanus*, gives a quite complete variety list.

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No. 7



GLADIOLUS "KLONDYKE."

Klondyke is one of the first productions of Wilbur A. Christy, of Warren, Ohio, to attract public notice, and still continues to hold a prominent place in the lists. It is one of a lot of seedlings grown about the year 1900. The seed which produced it was from a cross between *Marie LeMoine* and one of Burbank's California strain, pollinated by hand. From the latter *Klondyke* inherits its sturdy, free habit of growth, while the color is from the other parent.

Klondyke attracted the attention of the Livingston Seed Company about the year 1904 and was catalogued, described, illustrated, and, in fact, introduced by that firm, who for a number of years controlled its sale. Later the stock was sold to Arthur Cowee, Berlin, N. Y. The variety is now

well distributed, both in this country and abroad, and appears in almost every catalogue of note.

Klondyke has a sturdy, upstanding habit of growth seldom equalled, combining the stocky, vigorous, weather-defying habit of the California strain with the form, color of bloom and prolificacy of the French parent. A most hardy, vigorous and productive sort, yielding freely of large round cornels. The stock is of medium height, the flower of medium size, is round, well-opened, and of great substance. The spike never crooks. A first-class shipper.

Color, a clear primrose yellow, with a small throat-blotch of dark maroon. Cut in the bud and bloomed out in a dark, cool room, it comes a clear pearly white, very handsome and useful.

International Registration of Gladioli.

THE Editor of THE MODERN GLADIOLUS GROWER, as a member of the National Gladiolus Society (British) is in receipt of a communication from Mrs. Atkinson, the Secretary, with reference to the international registration of Gladioli. This registration contemplates not only the registration of names, but also the publication of a list, to be as complete as possible of all Gladioli in commerce, together with full color descriptions of each variety.

So many new varieties are coming on the market and there seems to be such a tendency on the part of some growers to rename varieties originated by others, either through misunderstanding, inadvertence, or for some other reason, that it would seem that a record such as proposed is necessary to assist in the future registration of new Gladioli and to prevent confusion, misrepresentation, duplication of names and injustice to hybridizers who have made the work a life study. The proposed international registration of Gladioli will be of untold benefit to the trade if properly and consistently carried out, and it is to be hoped that sufficient support will be forthcoming to insure that the work be carried forward as rapidly and as perfectly as possible.

The work takes the nature of a rather arduous task, and there will necessarily be considerable expense involved. The Secretary is asking for voluntary contributions toward a special fund for this purpose. Those who are interested in the work or who are willing to contribute toward same may address the Secretary as follows: Mrs. G. H. Atkinson, The Flagstaff, Locksheath, Southampton, England.

A circular has been gotten out as a start toward the work which we print in full as follows:

The Council of the National Gladiolus Society has decided to publish a complete list of all Gladioli in commerce, together with the name of raiser and a full description of each variety, the colours being fixed by the Colour Chart of the French Chrysanthemum Society. This registration will prevent the duplication of names and of old varieties being issued under new names. It will also protect raisers of new varieties from having their novelties sold by other persons without their permission.

The work of compiling this list is to be commenced this year at the Trial Ground

at Locksheath. All varieties tested and fixed will be registered under a number, and a list of these will be published in the Autumn Handbook. This list will be added to and re-published annually.

Growers are invited to send any varieties they may wish to have registered to the Secretary at Locksheath. Not less than five bulbs of each variety should be sent. These bulbs will be returned to the grower at the end of the season with their increase. It is not proposed to charge any fee for the registration of Gladioli, as it is hoped that the Special Fund which is now being raised, and to which growers are invited to contribute, will cover all expenses.

Growers who have a very large number of varieties of their own raising may send spikes of cut bloom to the Secretary for registration in place of sending the bulbs, but where any striking novelty is concerned it will be better for the grower to send five bulbs.

It is believed that all concerned in the trade in Gladioli will perceive the great benefit that will result from having an International Registered List of Gladioli.

The following varieties are not required for registration, as the Secretary already has them in her own collection:—

Electra	Fire Flare
Faust	Eugene Scribe
Halley	Hercule
Princes	Le Phare
Niagara	La Francaise
Panama	Lamarck
Baron Hulot	L'Unique Violet
Pink Perfection	Admiral Cervera
Mrs. G. W. Moulton	La Gloire
{ Mrs. Frank Pen-	Empress of India
{ dleton	Loveliness
Daisy Rand	Excelsa
Ida Van	Mrs. Francis King
{ Mrs. Montague	Principine
{ Chamberlain	Brenchleyensis
Mary Fennell	Glory of Holland
W. H. Abbott	Golden Queen
Sans Pareil	Golden West
Black Prince	President Taft
Pius X	Purity
Hallé	Pink Beauty
Blanchefleur	Sulphur King
Umbra	Liebersfeuer
Czar Peter	Hollandia
Michiean	Kunderdi Glory
Gallieni	Lily Lehmann
Armagnac	Badenia
Marie Therese	Orion
Gargantua	Willy Wigman
Carnation	Europa

Commandant	Southampton
Marchand	Silver Sheen
Schwaben	I. S. Hendrickson
Zeppelin	Shedowa
Meteor	N. Dee Childs
Aprikose	Mrs. Beecher
Anna Goldschmidt	Aline
Major Reinhardt	Melrose
Ivory Ruffled	Rare Ray
Azalea Ruffled	D. Burnham
Giant White	Alaska
Mrs. A. E. Kunderd	Mrs. F. M. Lupton
White Excelsior	Blanche
Madame Monneret	Golden King
Goliath	Dawn (Groff)
Contrast	Blue Jay
Prince of India	Chicago White
Dawnray	Mephisto
Fire King	Dora Kraus
Scribe	Myrtle
Portland	Peace
St. Louis	War
Wild Rose	

The Gladiolus Society of Ohio.

We print below a score card prepared by direction of the Gladiolus Society of Ohio, which was used with success and satisfaction at the flower show held by this society in Cleveland, Ohio, August 15-16, 1913. This score card was prepared as the result of much labor and correspondence on the part of the committee in charge. A much more comprehensive score, largely the work of President Betscher, and adapted especially to the use of hybridizers has been prepared, but is not yet ready for publication.

SCORE-CARD FOR USE IN JUDGING GLADIOLI.

Prepared by Direction of the Gladiolus Society of Ohio.

NOTE:—The ideal, or perfect Gladiolus combining all the qualities here enumerated, should score 100 points. Approximation to the ideal standard, which is all that can be looked for at this time, should be designated by the award of points ranging from 0 to the full total in each case, according to the excellences of the specimen under consideration.

1. SPIKE—20 Points.
Long, 5; Straight, 5; Many blooms, 5;
Facing together, 5 20
2. FLOWER—25 Points.
Large, 5; Widely opened, 5; Broad,
round petals, 5; Substance and texture, 5; Beauty of bud, 5 25
3. COLOR—20 Points.
Attractive, 10; Either clear self, or
strikingly marked, 5; Adapted to
cut flower trade or florists' use, 5 .. 20
4. FOLIAGE—15 Points.
Dark, healthy green, 5; Broad, 5;
Abundant, 5 15
5. DURABILITY—10 Points.
Continuance of bloom on spike, 5;
Lasting qualities as cut flower, 5 .. 10
6. GENERAL EFFECT—10 Points.
In mass, bed or field 5; In vase or
cut display, 5 10

100



Dr. A. C. Beal, Ithaca, N. Y., in charge of
American Gladiolus Society Trial Grounds.

The question of what to do for cut worms bothers many Gladiolus growers during the spring and early summer, and if anyone can offer suggestions which will be helpful as to their origin, prevention, etc., we will be glad to have them do so.

A rule which is in quite common use among Gladiolus growers is that flowers may be expected from the planting of Gladioli in about ninety days after the bulbs are put in the ground. This is, of course, an arbitrary rule and it does not always apply. A great deal depends on temperature and moisture conditions as well as the variety planted. Some varieties will bloom in 75 days or possibly less during the warmest period, while others require 120 days or even more if in the ground during any considerable period of cool weather.

The Application of Mendel's Law in the Breeding of Gladioli.

By EUGENE N. FISCHER.

IN response to an inquiry, the editor of this magazine has asked me to state my observations regarding the operation of Mendel's law in the practical cross fertilization of Gladioli.

So much has been written on the subject of Mendel's method by prominent authors, confirming his conclusions and extending them to other cases, that a very brief review of his method should suffice here for those readers who may not have found an opportunity to familiarize themselves with the subject.

This form of inheritance was first advanced by Gregor Mendel, an Austrian priest, in 1865 and is generally called Mendelism, or Mendel's Law.

The result of his experiments, conducted mostly with garden peas but since found to hold practically true in many different forms of vegetable and animal life, were, concisely, as follows: If two parents of strongly contrasted characters, in each of which those characters are so well established that they will breed true, say for example, rough and smooth, tall and dwarf, or light and dark, be crossed, the offspring of the first generation will show the character of one parent only; but when these hybrids are self-fertilized, in their offspring the characters of both original parents reappear.

That character which appeared in the first generation is called the dominant, and that which was lost in the first generation to reappear in the second, the recessive character. In the self-fertilized offspring of the first hybrid generation the recessive character will reappear in about one-fourth, and these recessives will breed true in all succeeding generations; of the remaining three-fourths, one-fourth will be dominant in pure form, that is, will breed true, and the remaining half that shows the dominant character are internally hybrid, and their progeny will split in the same way as that of the previous generation; that is, as the progeny of the first generation when self-fertilized.

I see no reason why we should not benefit by the use of the Mendelian method in the practical side of Gladiolus breeding; that is in the creation of new types by the recombination of pre-existing characters. To begin, one must have an ideal form or variety in mind, and then choose parents having characters, that

being combined, should tend to produce this ideal result. These parents are then crossed, which is easily accomplished in Gladioli by removing the anthers, and the pollen chosen for the male parent may at once be applied to the mature stigma of the emasculated flower. Of course the spike must be well covered to protect the stigma from the influence of other pollen than that selected.

The cross-bred seeds thus produced are sown and the offspring in the first generation may have only one of the characters marked, or be not sensibly different. We must also consider that since the garden Gladioli are mostly hybrids and not pure forms, unexpected results may occur in the first generation, as the recessive characters of former parents may appear, or other factors determine the quality and distribution of color.

For scientific study or demonstration of the Mendelian formulae, one should of course, first self-fertilize his parents in order to prove that they are pure in the character selected, but in practical breeding this is generally omitted, in flowers that take a longer time than a year to come to maturity, in order to save time. Your hybrids or offspring of the first generation may give no indication as to whether or not you have succeeded in your attempt to produce your ideal. These hybrids must be self-fertilized, and it is important to lay stress on the necessity of sowing a large amount of seed from which your family of the second generation is to be grown. There must be enough to give a chance for the combination of your desired qualities, and the possibility of other rarer combinations to appear in order to obtain novelties.

My own experiments in breeding the Gladiolus are far from complete and I feel ill prepared to state definitely to what extent we may depend on the Mendelian law for assistance in practical work, but this much I can say: That I have observed the prevalence of the dominant character in the first generation, and that the progeny of the second generation show much more diversity and I have here observed recombination of pre-existing characters. For instance, in crossing a large red flower with a small

(Concluded on page 112.)

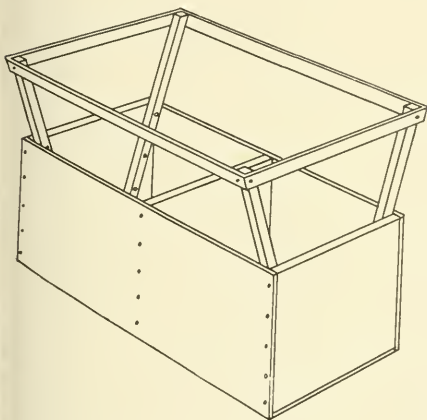
MRS. AUSTIN'S TALKS FOR AMATEURS.

NO. 6—THE CUT FLOWER SHIPPING PACKAGE.

Vacation and recreation days are coming now, but the busy Gladiolus grower knows not the meaning of the word *rest*.

The crop of blooms is well on and we are hustling to get the cut flower shipping packages ready, for when that first bloom is about ready to open we will cut the spike, give it enough water to crisp the unfolding petals, place it in the shipping crate and consign it to the florist or commission man, who will in turn furnish the city flower lover with it almost as fresh as we have them at home.

The shipping package is an interesting problem and we believe there are about as many different kinds as there are growers.



Shipping crate made from orange box.

Instructive lessons on this may be learned at the Gladiolus flower shows by going early and watching exhibitors unpack the blooms from the various packages.

A cheap shipping crate is the orange box which may be bought of the grocer or fruit dealer at from \$3.00 to \$5.00 per 100. It is necessary to extend the height a little according to the length of the spike, and this may be done by nailing a square strip ($\frac{3}{4}$ inch) in each corner and so it will flare at the sides a little, then nailing a light strip of lath around the top.

Line the box with newspapers allowing them to come up over and fold under the lath frame and it is ready to receive the blooms. The newspapers will yield a

little so the buds will not bruise and yet will hold firmly. Tie the spikes in bunches of 27 which allows a couple for good measure and unexpected damage. Stand them perpendicularly and pack closely.

Shipped in this manner you have about the minimum of weight and of expense and the commission man likes the crate because he does not have to be to the trouble of returning it.

Cut flower boxes of pasteboard or jute may be purchased from dealers in florists' supplies. They should be shallow and long enough to hold two lengths of spikes, packed flat, the ends of which would overlap a few inches in the middle.

There are various kinds of return packages in use. An excellent one is a square wooden box with the frame top like the one on the orange box, and with a tin can fastened in each corner to be filled with water in which the spikes are placed when shipped. This is a good crate in which to ship spikes that have two or more flowers open.

There is the large crate for several hundred spikes. This is made somewhat flaring, lying on one side when being packed. The spikes are bunched and when the crate is full the upper side is closed like a door. These are shipped standing.

A shallow wooden box is often used, one in which the blooms are packed with tops of spikes at the ends and stems overlapping. These are held in place by nailing on short strips of wood. Several thicknesses or a roll of paper may be placed over the stems and then another layer of spikes.

Perhaps one of the best is the tall basket with the flaring top, similar to those in which vegetables are shipped. This is especially desirable on account of its lightness and the convenience of nesting them when returned.

All return packages should be painted, and the name and address of the owner also painted on them conspicuously as this saves time and trouble for both the shipper and consignee. The words "Return to" might also be painted on just before the name.

MRS. A. H. AUSTIN.

As a part of the great Iris family the Gladiolus might be expected to produce some active medicinal ingredients like irisine, but although considerable work has been done along this line by Dr. Van Fleet, as well as by Parke, Davis & Co., the large wholesale chemists of Detroit, Mich., nothing of medicinal value was found in the cultivated Gladiolus.

Time Required for Blooming.

THE record which appears below has been sent to us by one of our friends, but we have inadvertently lost trace of its origin. Several correspondents have recently asked about length of time it takes between planting and blooming, and therefore, some information along this line will be useful. Of course, conditions as to temperature, sunshine and moisture enter into any problem of this kind, but any record is better than none at all, and we would be glad to hear from those who have made notes on the length of time required for the different varieties

between planting time and bloom. The record here printed is useful, and we hope it will be added to very largely by other growers.

It should be borne in mind in making records of time required for blooming as well as habit of growth that one test is not sufficient. It is necessary that two or three years' record be made in order to establish a standard which will be useful as a guide. A variety which shows a weak growth one year might show up well the next or under different conditions.

GLADIOLUS RECORD, 1913.

Name	Planted	No. Days	First Bloom	Growth
Baron Hulot	May 31, 1913	77	August 16	Weak
America	" " "	75	" 14	Strong
Klondyke	" " "	78	" 17	"
Chicago White	" " "	77	" 16	"
Chicago Red	" " "	78	" 17	"
Isaac Buchanan	" " "	78	" 17	"
Meron	" " "	81	" 20	"
Attraction	" " "	78	" 17	"
Deborah	" " "	76	" 15	"
Dr. Sellew	" " "	80	" 19	"
F. L. Oakley	" " "	85	" 24	"
Oddity	" " "	83	" 22	"
Salem	" " "	81	" 20	"
Wm. Falconer	June 24,	89	Sept. 1	Very strong
Mrs. Francis King	" " "	87	Aug. 30	" "
Crepescul	" " "	87	" 30	" "
Diamant	" " "	87	" 30	" "
Escarboucle	" " "	75	" 18	" " tall
Matador	" 8 "	91	Sept. 7	"
Pactole	" " "	82	Aug. 29	Weak
Thermidor	" " "	80	" 27	Strong
Titania	" " "	91	Sept. 7	"
Irene	" " "	93	" 9	Medium
Princeps	" 4 "	90	" 4	"
Glory (Kunderds)	" 16 "	73	Aug. 28	Very strong
Glory (Kunderds)	" 21 "	76	Sept. 5	" "
Primulinus (Hybrids)	" 8 "	72	Aug. 19	" weak
Magnificus	" " "		Did not bloom	Strong
Alamanthee (Amalthee)	" " "		" " "	Weak
Mr. Jansen	" 16 "		" " "	Strong
Corqueto (Conquete)	" " "		" " "	"
Demosthenes	" " "		" " "	"
Proserpine	" " "	84	Sept. 8	"
I. S. Hendrickson	May 31, "	109	" 17	Very strong
Madrilene	June 16, "		Did not bloom	"
Lafayette	" " "		" " "	Very "
Prof. La Monier	" " "	90	Sept. 14	" "
Sceptre de Flore	" 8, "	84	Aug. 31	" "
Superb	" 4, "	89	Sept. 1	" "

Dug bulbs, Oct. 26, 1913.

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
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Special favors to none, and a square deal to all.

Canadian and Foreign
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Growers are invited to contribute articles or notes over their own signatures, but the Editor reserves the right to reject anything which in his judgment is not conducive to the general welfare of the business.

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International Registration of Gladioli.

The writer is in thorough sympathy with the idea proposed by the British National Gladiolus Society for the registration of Gladioli. It is hoped that American growers will lend their support in the work which this organization is doing. It would be well, perhaps, at this time to point out that the American Gladiolus Society has been working along similar lines for some time. The work is rapidly approaching completion and we hope to publish after the present season a complete list of all the Gladioli in commerce, together with complete descriptions of all the varieties that have been tested on the trial grounds at Cornell University. While it has not been possible to secure all the varieties, it is thought that a sufficient number have been tested to determine practically all of the synonyms now in the American trade. However, there are a considerable number of varieties in Europe that are not known or very little known to American growers. It is extremely desirable, therefore, that some organization undertake the task of straightening out the nomenclature of at least all the European varieties. Contributions from American

growers would aid in making the work complete. We have had considerable assistance from European growers of Gladioli, and I hope there will be a very general response in reciprocating in the work which they propose to do.

DR. A. C. BEAL.

In his answer to "M. F. S." in our 'Queries and Answers Dept.' this month Matthew Crawford offers some suggestions about fertilizing that amateur growers will do well to heed carefully. Strong and concentrated chemical fertilizers in the hands of an inexperienced person, and sometimes in the hands of those who are more experienced, may operate disastrously. If you use them, do so with the utmost caution and on the side of using too little rather than too much.

Gladiolus Nanus.

We are pleased to reprint this month from Bulletin No. 4 of the American Gladiolus Society an article by Maurice Fuld on Gladiolus Nanus. Mr. Fuld writes in his usual entertaining style and tells an interesting little story about how the Nanus varieties were introduced into America. These early varieties are likely to play a much more important part in

the Gladiolus trade in future, if not in the present varieties, then certainly in crosses and the breeding of early flowering sorts for which there will be a large and increasing demand. We are reprinting this article on request, and there are, doubtless, many of our readers who will be glad to have the rather complete information given by Mr. Fuld regarding Gladiolus Nanus.

W. W. Wilmore, Jr., has sent the Editor six corms of Gladiolus *America* which were grown on his place at Wheatridge, Colo. These corms when placed side by side make a total measurement of $15\frac{1}{2}$ in., and they weigh exactly one pound. We shall expect some pretty large spikes of bloom from them. Mr. Wilmore states that he uses this stock to force, and that he dug nearly 10,000 which would average the same as the sample sent, and that he expects to harvest 25,000 next fall which will be as good. It will be noted that 12,000 bulbs of this size would weigh a ton, and certainly they are extraordinarily large for *America*.

Photographing Flowers.

BY B. C. AUTEN.

In photographing flowers, or anything else in which different colors appear, the colors do not make an impression on the plate in proportion to their apparent density. For example, a dark blue flower will photograph as white, while a light red one will photograph as black, or nearly so. To correct this apparent error, two means are employed, sometimes one or the other, but better in combination. These are the plates especially corrected for color, commonly known as "Orthochromatic" or "Isochromatic" and color screens.

The use of orthochromatic plates differs in no way from that of ordinary plates. They must be shielded a little more carefully from the light in loading and developing, as they are more sensitive than common plates, and liable to be fogged by much exposure even to the red light of the dark-room. The one I use, Seed's Non-Halation L Ortho, is a double-coated plate, and for that reason requires a dilute developer, but any formula for tank development is all right for use with

them. Special directions come in the box with all special plates.

The plate named above has advantages, outside of its special use with the color screen, above any other plate I ever tried, even for everyday use in both snapshot and time exposure work, and will give a much smaller proportion of failures in inexperienced hands than the plates commonly used by them. The saving so made will more than compensate for their extra cost, to say nothing of the better quality of the pictures which would not have been failures.

The color screen, in its cheapest form, is a flat piece of colored glass, mounted so as to slip over the front of the lens. A better type, and good enough for anyone but a professional color worker, is made of two sheets of glass with a colored film between, and mounted either so as to slip over the front of the lens, or to fit into the camera behind the lens. My screen is Carbutt's, and cost, I think, a dollar and a half.

The use of the color screen usually makes no difference in the method of taking pictures, except that a longer exposure is necessary. Screens usually come with their speed ratings given, I think. A very thin screen might take as little as twice the exposure, a medium screen perhaps four times the exposure, and a heavy screen probably six or more times the exposure required when the screen is not used. A few trials will enable the operator to work with good assurance of success, especially as a slight error in exposure does not make so much difference as when the screen is not used. Some screens require an allowance in focusing, but I think not the ones made for common outdoor use.

All pictures of colored flowers should be made with orthochromatic plates, and, if possible, through a color screen. With color screen, however, a time exposure is usually necessary, and this is sometimes impracticable.

Those who have been fortunate enough to order Asters, Pansies, Salvias, Verbenas, etc., from Paul L. Ward, Hillsdale, Mich., are congratulating themselves these days. Mr. Ward is an enthusiastic grower of all sorts of flowers, and while he makes a speciality of Gladioli, yet the old fashioned flowers and bedding plants have his attention, and he always puts out good ones. The Editor has sent Mr. Ward several orders, and the stock has always been of the finest. Distance is no bar to safe arrival as Mr. Ward uses great care in packing for shipment.

WAYSIDE RAMBLINGS.

SOME EXTRAVAGANT GLADIOLUS FIGURES.

Our enthusiastic friend, Mr. Maurice Fuld, has an article in *The Country Gentleman* entitled "Double Profit Crops—An Acre of Flowers for Bulbs and Seeds is a Good Investment."

I am something of an enthusiast myself but when I read that *King Humbert* Cannas bring \$40.00 per thousand and "never enough to supply the demand," and an acre of them is worth \$5,000 and an acre of dahlias should yield an income from flowers alone "in the neighborhood of \$5,000" and another thousand dollars for the roots, I am prepared for something startling when he discusses the possibilities with our favorite flower. Those growers who have been trying with more or less success all winter to unload a surplus of *Americas* for anything "in the neighborhood" of \$10.00 will be interested to learn from so good an authority as Mr. Fuld that "the lowest wholesale price quoted on this variety today is \$20.00 a thousand" and as an acre contains 250,000 bulbs, each bulb produces one spike, (why not two?) at two cents each, this amounts to \$5,000, which added to the value of the bulbs gives, as any one can readily see, a grand total income of \$10,000!!

That is, Mr. Fuld sees it that way, and there is no doubt in my mind that \$5,000 + \$5,000 = \$10,000 and I am wondering how many acres Mr. Fuld has planted. And why did not I, instead of trying to sell a few thousand, buy the necessary quantity to fill at least *one* little acre and win that \$10,000? But wait, the best is yet to come! Why fuss with cheap two cent stuff? *Pendletons* sell for \$250 per thousand. Correct, Mr. Fuld, and you "dare not give the total figures that an acre of such a variety might earn." But I dare, and I announce without fear of contradiction, that as soon as I can raise, buy or steal enough to fill an acre, (250,000 is his figure) and sell them for \$250 per thousand, I shall receive the magnificent sum of \$62,500.

But why stop with one little measly acre? There are farms "out west"—but stop! I dare not give the total figures which a quarter section might yield if planted to *Glory of Noordwijk* at \$5.00 per bulb!

What should Mr. Fuld have said to readers of *The Country Gentleman* to give a sane and correct idea of what may

be expected if one acre of ground were planted to mature bulbs of *America*? Planted in the ordinary way it would require 100,000 at a cost of \$8.00 per thousand for the best home grown bulbs and the grower would find about the same number when he dug them in the fall and he might be lucky enough to sell them for as much as he paid, so leave the cost out of the account. The income would be from the sale of cut flowers of which a conservative estimate would be 75,000 and if he found a sale for so large a quantity, Mr. Fuld's price of \$20.00 per thousand is fair. He would also have a couple of bushels of the small bulblets of questionable value at present. So instead of the \$10,000 income it shrinks in actual practice to \$1,500 with a great big IF in the problem at that. Before the bulbs are purchased let the farmer make the rounds of the wholesalers of the nearest big city and he will come home with a clearer idea of the possibilities of profit on this particular proposition. I should say if he sold \$500 worth he would do remarkably well, and out of that must be deducted interest, labor, commissions, express, etc., leaving a net profit of \$250 to \$300.

S. E. SPENCER.

AMERICAN GLADIOLUS SOCIETY TRIAL GROUNDS.

Your bright little monthly, *THE MODERN GLADIOLUS GROWER*, is one of my best friends, keeping me well posted as to what is going on in the world in our line. It is interesting and instructive from cover to cover, the advertisements included. I am glad that some one has interested himself sufficiently to give so valuable a medium to the Gladiolus enthusiast, and trust that your efforts will be crowned with success.

I have found an article in the April number, under "Wayside Ramblings," written by Mr. I. S. Hendrickson, to which I wish to reply. Mr. Hendrickson tells how the American Gladiolus Society has been governed; how the officers have worked for its interests and that of its members; and sadly deplores the facts that it is difficult to interest amateurs, and also that amateurs will withdraw after the first year.

With this I agree. Mr. Hendrickson and the other officers have, there is no doubt, done the best they could. I am personally acquainted with Mr. Hendrickson and the other gentlemen who served the Society in its infancy, and do not doubt their sincerity or ability.

While Mr. Hendrickson has covered the subject real well in the article to which I refer, there remains, however, one thing which he has, perhaps, overlooked, and that is: What becomes of the bulbs which are sent for trial every year? When a person sends bulbs, and usually choice varieties, pays the carriage thereon, and then after a few months of patient waiting, writes to the one in charge of the trials, and is not given a satisfactory answer and sees nothing in the reports of the society in regard to it, he finally begins to speculate as to the fate of his stock.

Anyone having lost bulbs in this manner will also lose his interest, and that is, I believe, why some amateurs, who, perhaps, while they did not send any bulbs for experimental purposes, will, however, cut loose from the society, because things do not seem clear to them. I have not written this to antagonize Mr. Hendrickson, but am merely bringing the matter up, for some one to throw a little light on the subject. ARTHUR A. KIRCHHOFF.

COMMENTS ON THE ABOVE BY DR. BEAL.

In reply to Mr. Kirchhoff's inquiry, will say that the Committee has repeatedly stated its position on the matter in its reports at the annual meetings of the Society and in the trade papers. It is possible that many amateurs have not had an opportunity to learn the facts.

The primary purpose of the trial grounds is to determine whether the named varieties now in existence are distinct or not. In order to do this it is necessary to grow the varieties side by side under like conditions. No other method will give the desired results. The Department of Floriculture is assuming all the expenses connected with care of the grounds and describing varieties, and we ask that the growers send us three to five corms of each of their varieties for the purpose mentioned. This is not asking too much of the growers, for we have never received one cent from the Society or the state for the work; and if we were to give it only its proportionate share of the time and energy which the Gladiolus industry warrants, we should not have accomplished very much. With the cooperation of the growers, we hope to benefit not only the florists in New York State, but Gladiolus lovers everywhere.

The question is asked—"What becomes of the bulbs?" In answer to this, will say that we have all the varieties that have been sent us, except in a few cases where the variety has been lost from disease—a cause of loss even to Gladiolus

specialists. We have tried out the varieties annually to compare them with the accessions of each year. When the work was begun it was hoped to complete it in two seasons. The fact that some growers have not sent in their varieties has delayed the publication of results. To my knowledge reports have always been promptly and cheerfully given when they have been requested by contributors.

Any one interested in the trials of Gladioli, as well as other flowers, will be welcome at any time during the season. We shall be pleased to show visitors what we are doing, and we will be glad of any suggestions for the improvement of the work.
DR. A. C. BEAL.

BETTER PRINTING.

Mr. White in the May issue agrees that we might have better printing, but it seems to me he is in error when he claims that expensive catalogs must be paid for by customers, and that they must of necessity be charged a higher price for bulbs. He quite forgets that an expensive catalog, like a high grade salesman, will be cheaper in the end, because it will sell more goods to a class of people who are attracted and influenced by artistic illustrations and fine quality in print and paper. And these people pay higher prices, not because of the greater cost of the catalog, but because of greater confidence in the ability of the grower to produce and sell a high grade product. It is a mistaken economy to advertise high class bulbs with cheap and unattractive printed matter.
S. E. SPENCER.

PLANTING GLADIOLUS SEED.

Prepare a sort of cold frame and enrich the earth well, but not too much. Have the ground well pulverized and sow the seed thickly as all will not germinate. Cover with one-quarter inch or so of fine earth, press the earth down firmly and water well but with a fine spray so as not to wash up the seed. Then cover with a carpet or matting until seed begins to sprout. Then take off covers, but cover with light cheesecloth or with a frame of slats (2-inch) with spaces of an inch between so as to keep shaded that the sun may not dry or burn up the tender shoots. Always keep moist. Once allowed to become very dry will kill many plants. But still they must not be kept too wet to make the young plants "damp off" or decay at the top of the ground.

J. M. ADAMS.

Gladiolus Nanus.

BY MAURICE FULD.

In Bulletin No. 4 of the American Gladiolus Society.

ACCIDENTS are oftentimes responsible for the introduction of valuable novelties and thus introduced their real worth is brought before the public in a more telling way than when the usual methods are adopted. It was an accident pure and simple which was responsible for the introduction in America of the above named type of *Gladiolus* and as I believe this history will interest the readers I shall relate it.

Some eight years ago while I was employed with a Boston seed house, the management, when ordering bulbs from Holland, resorted to the time saving device of marking the catalogues with the quantity of the individual items they wished to order. That year *Gladiolus Nanus*, *Blushing Bride*, was catalogued for the first time with a foremost Holland house.

Gladiolus Colvilli alba, sometimes called the *Bride*, was the variety desired by my employers and in the list in question just preceded the new one. By a simple oversight the quantity wanted of *Bride* was placed before *Blushing Bride*, and this error was not discovered until the goods arrived and the invoice showed a difference of cost ten times in excess.

Supposing that a mistake had been made in the invoice by the foreigners, we wrote for explanation and were informed that what we ordered was a novelty of recent introduction and much superior to the old variety. On the strength of this description we offered the bulbs to some progressive growers, but found the price the stumbling block for a ready sale. To be any good they had to be planted soon, and we were bound to face either a total loss or a partial one by sacrificing them at a price much less than cost.

Upon my personal suggestion we adopted a new method of introduction. We sacrificed the entire cost plus duty, which at that time was 25 per cent, *ad valorem*, and divided the lot into packages of 100 each. Half of the number we mailed to the foremost private gardeners and half to the most prominent commercial growers of the east with the request to accept them with our compliments and give them a fair trial. This done we awaited results.

What was the result? In every instance the flower met with instant success and

approval; exhibited, it received a first class certificate of merit from the Massachusetts Horticultural Society and others; every grower was intensely pleased with the absolute ease with which the bulbs were forced and the exquisite beauty and marking of the flowers. There was no difficulty in selling large quantities of it the second season which somewhat repaid for the loss the first year.

That, not only this variety *Blushing Bride*, but really the whole type is now a popular winter forcing flower, is plainly proven by the fact that several varieties are now offered by every seedhouse in the country. American seedhouses, it appears to me, either have lost confidence in novelties or consider their introduction a loss, for I cannot understand why from a list of varieties in existence, only a handful are offered here. The reason given by some is that there is no demand for them. How is it possible to get a demand with no literature on the subject, is a puzzle perhaps some one else can solve for me.

Now what is *Gladiolus Nanus*? A dwarf variety of exceedingly slender growth, attaining a height indoors of from 24 to 30 inches. The flower stem is in thickness less than a light pencil and tapers toward its tip. While it is fairly erect it has a very graceful bend at the top and thereby lends itself for a better cut flower, the foliage is also fine and slender and but a few spears accompany each stem. The flowers which are loosely arranged in singles along the stem are of medium size, on the average 3 inches across and are splendidly colored. They are of the open form and while some varieties are self-colored without any marking the majority have an exquisite elongated blotch in the longer part of the four lower petals. Sometimes this blotch is one colored, often it is set in a frame of either lighter or darker shade but at all times it is artistic. Three to four flowers are open at one time and a stalk produces from 6 to 10 flowers as a total.

Regarding its culture I want to say that when I speak of forcing flower I do not mean that it can be had in flower during midwinter. Oh, no! at the earliest it can be made to bloom about April 15th, and I do not recommend it to be forced to bloom before May 1st., and better, May 15th.

It loves a slow growth with a cool temperature such as a carnation, and many commercial growers today plant it right between the carnations without giving it any extra space, thus getting two crops where formerly they reaped but one. They are exceedingly slow in showing growth and actually make but little growth until spring when the sun rises higher. At that time carnations are plentiful and cheap and many growers throw them out, thus making room for the Gladiolus, but that is not at all necessary. While the above method may perhaps be handiest, these Gladioli can be better grown if planted in flats and stored away in a cold frame and brought in during February or March when even then they should be forced with only moderate heat. Bulbs can be obtained in October and should be planted not later than December 1st.

A slow growth produced by gentle forcing allows the foliage to develop perfect but if much forced the tip becomes yellow and brown and injures the sale of the flower. A crop of flowers does not come all at a given time, but extends over a period of six weeks, another valuable factor for a commercial grower. This type is often called "early flowering" and this is right because the flowers appear from 2 to 3 weeks earlier than the earliest variety of any other type.

OUTDOOR CULTURE.

There are two methods by which this flower can be successfully grown outdoors, but in both instances the planting must take place in November.

Method No. 1—Plant bulbs 2 inches apart and $1\frac{1}{2}$ inches deep in a well drained cold frame and when the real cold sets in cover with sash and shutter. No further care is necessary until springtime when the shutter is removed quite early to allow all the sunshine possible to enter, but sash should remain until the young growth is hardened sufficiently to withstand frosty nights. Plants grown thus and fed lightly with liquid manure produce perfect flowers and foliage ready for cutting the end of May and all through June.

Method No. 2—Prepare a bed on high level, where the soil is fairly rich but well drained and no water will stand during winter. Plant the bulbs 3 inches deep and 3 inches apart and cover bed with leaves or straw to a depth of 6 inches. Early in spring examine the bed and see if growth is peeping through the ground; if so, remove the covering and mulch between the rows with a thick

layer of cold manure. If this mulching is not done the foliage will again grow imperfect while the manure seems to cool off the surface and allow the growth to mature more slowly.

Plants grown outdoors as per method No. 2 are of a much dwarfer growth; the flowers attain a height of 18 inches only, are set closer on the stem and appear about July 1st, fully a month earlier than other types. Gladiolus Nanus is also known under the name of Gladiolus *Cardinalis*, but the latter is a variety while the former is the type Gladiolus *Colvilli* and is a distinct specie. *Cardinalis* resembles some of the varieties of Nanus, but they are not of the same species.

I append to this article a list of all the varieties of Gladiolus Nanus that have come under my observation and considering that this type is but few years old, I am amazed at the wide range of color obtainable in it. The shades of lavender such as *Sappho* and *Modesty* I have never seen in the large flowered varieties, and *Peach Blossom* and *Queen Wilhelmina* are the equal of the best commercial Gladioli.

Ackermann, salmon shaded orange.

Apollo, orange blotched white.

Admiral Togo, deep pink.

Alexis, light salmon.

Antoyn Roozen, soft violet with rosy blotch.

Blushing Bride, delicate rose suffused with white and deep red blotch.

Boildien, carmine.

Brilliant, the earliest red.

Beethoven, lilac.

Booy St. Vincent, lilac rose.

Cardinalis elegans, orange red, large white blotch.

Catharine, pure white.

Chas. McIntosh, orange red with purple blotch.

Crimson Queen, scarlet, violet blotch.

Carnot, dark scarlet, purple blotch.

Charmante, creamy rose, pretty blotch on lower petals.

Delicatissima Superba, delicate pink with dark blotch.

Delicate, white, crimson blotch, an improved Blushing Bride.

Duchess de Parma, rose flaked white.

Duke of Albany, light rose, carmine spotted, white eye, very free blooming.

Fairy Queen, light scarlet.

Fire King (Ardens), brilliant orange scarlet.

Fiery Knight, bright vermillion scarlet.

Florus, light pink shaded crimson, white eye.

Favorite, pink, blotched sulphur.

General Scott, white with red blotch.

Gordon, most delicate lilac.

Henry Irving, soft lilac, flaked white and violet.

Innovation, beautiful soft pink.

Jeanne Potier, pale crimson with dark blotch.

Konigan Wilhelmina, delicate pink with dark pink blotch.

Kelway's Beauty, white spotted rose.

Lady Howard, lilac and white.

Leonora, soft rosy white, pink blotch.

Lord Grey, pale red, white blotch.

Lucretia, large white, flushed rosy flesh, yellow blotch, edge red.

Little Lady, white flamed, wine red.

L'Unique, fiery orange red, blotched pure white.

Mathilda, white shaded, lilac blotch, sulphur, bordered with lilac.

Mina, creamy yellow, orange blotch.

McIntosh, fine scarlet.

Marlborough, rose.

Madame McIntosh, dark orange scarlet with purple blotch.

Maltravers, deep pink.

Modesty, delicate violet, pink blotch.

Orange Queen, clear orange scarlet, blotched white.

Peach Blossom, pure salmon pink.

Pink Perfection, clear satiny pink.

Princess of Wales, large white with rose overhead.

Prince of Wales, light pink.

Professor Blume, extra fine blush.

Queen of Holland, pure white with a distinct crimson blotch.

Queen Wilhelmina, (see Konigan Wilhelmina.)

Red Prince, bright orange red, white blotch.

Rosy Gem, rose with carmine blotch.

Romulus, salmon, white blotch.

Rose Queen, deep rose.

Rosy Morn, soft rose shaded orange.

Rosea Maculata, light red, white spot.

Sappo (Zimmermann), most delicate lavender, with lilac blotch.

Stephanie Eudlicher (Ganbaldi), light salmon.

Sarman Gem, salmon with lilac blotch.

Salmon Queen, salmon orange.

Sans Pareille, light lilac, small blotch on lower petals.

Sydonie, very fine soft rose, dark blotch with cream center.

Von Moltke, soft rosy and light orange sturdy grower.

Victor Hessen (see Apollo).

Victor Hugo, light red, long stalk.

Von Schiller, rose and violet.

William III, fine salmon pink, crimson blotch.

Weber (Duchesse de Monpensier), cherry red, white spot.

Where are our American Breeders that

they cannot recognize the wonderful possibilities by breeding Nanus with Childs', etc. Forcing Gladioli today is a mighty important commercial factor and I do not believe that I exaggerate when I state that at least million bulbs of *Gladiolus America* alone are used for this purpose. I have great confidence in our American breeders believing them superior to all the European, but I will admit they are slow at times in grasping opportunities.

Growing Gladioli from Seed— Storing Bulblets, etc.

In regard to growing Gladioli from seed in flats—the types made me say in THE MODERN GLADIOLUS GROWER for May: "Two seeds to the inch of row," when it should have been "ten (10) seeds to the inch of row." Two seeds to the inch of row would probably produce a larger bulb, but it would take a great many boxes if one has much seed to sow.

I neglected to state in "Cultural Hints on the Gladiolus," how I keep the hard shell bulblets over till the second year. I keep them in sacks (I presume boxes would do as well) 16 to 32 or more quarts in a sack with some fine dry soil to fill the spaces. If there are some small bulbs that pass through the sieve in separating they will also keep perfectly and come up many days before the bulblets when sown with them.

With me bulbs $\frac{7}{8}$ or 1 inch in diameter produce just as tall a spike and as large flowers as first size bulbs, but the spike will not be as thick. The land should be fertile.

JOHN H. UMPLEBY.

Gladiolus "Alatus."

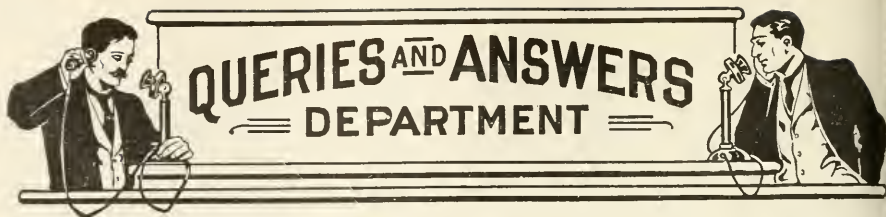
TO THE EDITOR:—

In reply to your inquiry concerning *Gladiolus Alatus* in THE MODERN GLADIOLUS GROWER, Vol. I, No. 5, page 80, would say:

Gladiolus Alatus can be bought from Mr. C. G. VanDuberger, Jr., Zwanenburg Nurseries, Haarlem, Holland. The price is about 25c. per dozen. They also have hybrids *Gladiolus Alatus*. You understand, of course, that this is one of the species which require autumn planting, or in cold districts, greenhouse treatment. It flowers very early.

F. SCHANBEL,
Oberlahnstein, Germany.

Those who have not already subscribed to THE MODERN GLADIOLUS GROWER should do so at once.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Trouble from Rot or Disease.

TO THE EDITOR :—

The initial number of your valuable little periodical received.

I hope you may be able to aid me in combating the rot which has almost discouraged me in trying to grow this beautiful flower, the Gladiolus. My experience covers a period of but three years during which time I have expended between \$30 and \$40 for bulbs from about eight different growers. Have tried about 30 different varieties and everything rots with possible exception of Kunderd's *Ruffled Glory*. *America*, *Niagara*, *Princeps* and other strong growers go the "way of all living."

A few will die down from soft rot, before the blooming period is reached. Most of the healthy bulbs direct from the growers will bloom the first year after which the mortality becomes heavy.

Those that die down in August and September are about worthless for another year. The parent bulb is found to be scarcely shriveled in many cases, with the superimposed offspring no larger than a filbert. The rule is that the more the lower bulb is shriveled, the larger the top bulb becomes; but in none of these cases has the top bulb attained an independent root system of its own, nor do cormlets ever appear in August or September.

I have written Prof. Massey of Salisbury, Md., who writes me to leave off all manure. I also wrote Mr. Tracy who advised me to lime both in the fall and spring which I am doing. I shall also mulch in hot weather, as I have an idea the ground in our latitude gets too hot. My garden has an ideal soil and exposure.

Growers tell us Gladioli are easily raised. Well, I would spend \$100 in bulbs this year if I could be guaranteed results. As it is shall "blow in" \$15 more and if failure comes, quit the game.

Of course, my wife and I are greatly disappointed. What can you do for us? Any suggestions you can make will be greatly appreciated.

H. N. E.

Answer:—From the data given it is pretty hard to give a good reason for the entire failure, but inasmuch as all of the 30 varieties tried, from eight different growers went the same way, it is evident that the fault is not of the bulbs but of something in the soil or in the manner of growing. There are indications that some of the bulbs might be old and exhausted.

I would not be discouraged and would plant this year using if possible new

ground with a good sod. After ploughing spread lime at the rate of a ton to the acre and harrow in well. Plant deep.

Soak all bulbs before planting in formaldehyde. (See article by G. D. Black, page 35 March issue.) Cultivate frequently to keep up a steady growth all summer. If you are obliged to use the same land year after year, be sure to sow this fall after the crops are off a medium seeding of rye. This will make a pretty good sod by the time to plough in the spring and will correct and enrich the soil.

I heard of a similar case last spring where the party was discouraged but I persuaded him to try once more following along the line suggested above and he reports a good crop of healthy bulbs.

CLARK W. BROWN.

Answer:—I do not feel qualified to give a definite reply, as I have not had sufficient experience to speak with authority, and it seems that experience does not yet enable growers to meet the situation. This I take to be the problem with which the Cornell staff have been wrestling for some years, and as yet with no definite result. If allowed to state my opinion, I would say that this "rot", so-called, is not a disease in itself, but the effect of a fungi-form or bacterial growth within the substance of the bulb as its unwilling host, similar to the growth causing the rot in the potato. If this be true as the investigations at Cornell would seem to show, there can be no trouble from this source unless there be first a source of infection, either in the soil or more probably in the stock used for planting. Pure uninfected stock, planted in soil, free from the infection, will surely be healthy. It is my belief that this disease has been introduced from importations from foreign countries, and as yet no remedy is known except the destruction of the infected stock. It is true this seems like burning the barn to catch the rabbit, but we are not left without remedy. There is, it is safe to say, no variety that is immune, but we are

glad to be able to say that seedlings always grow healthy bulbs, unless grown in infected soil. Let our growers who are suffering from this infected stock, discard it entirely and grow seedlings of their own in healthy soil, and I will guarantee healthy stock, and if the seed used is from good parentage, the quality of the flowers will be satisfactory, and sometimes very gratifying indeed, as the new varieties unfold.

WILBUR A. CHRISTY.

Holland Grown Gladiolus Bulbs— Treating with Formaldehyde— Damage from Sprouting and Root Growth.

TO THE EDITOR:—

Will you please give me your opinion upon treating Gladiolus bulbs with formaldehyde, that have tops started? Will it injure the tops?

I have received (Apr. 10) 75,000 first and second size *America* from Holland. They arrived with roots one and two inches long growing out of them, and nearly all have tops one-half inch or more. I spread the bulbs out thinly upon my stable floor to dry off, which they did, but the tops are alive, and I am wondering whether it will do to treat them for scab. The scab is not very bad, but it does exist on them.

Can you tell me how long they should remain in the solution, and how long after treatment can one hold them before planting; also should they be dried off after treating before planting?

I read Mr. Black's article in the March issue, but it did not cover these points.

I am intending plowing under six cords cow manure (fairly fresh) to the acre, then use one thousand pounds potato phosphate in furrows additional. Do you think the bloom will be affected on account of this early root growth? H. D. C.

Answer:—The formaldehyde solution does not seem to injure the tender sprouts of bulbs that have started to grow, but they are very liable to injury by handling.

Our experience is that 12 or 24 hours in the solution is more effective than a shorter period of time. We prefer to plant soon after treatment which prevents much evaporation of the formaldehyde.

Any growth before planting tends to weaken the vitality of the bulb.

Our friend's experience seems to be the general rule rather than the exception. We have been unable to get planting stock of some varieties in America, and consequently were obliged to get it from Europe. It has nearly always come in a damaged condition.

When the bulbs are packed tightly the moisture from the bulbs is confined and causes the trouble. If they were packed in some way so as to permit a circulation

of air, it would probably be little better, as the air of Holland and the ocean is very humid.

The Holland growers have quite a number of traveling salesmen in America selling tulip bulbs, etc., and they are to no extra expense in taking orders for Gladiolus bulbs at the same time and can, therefore, sell at a low price.

We are learning by experience that Holland grown Gladiolus bulbs are not satisfactory, and that what is saved in price is more than lost by the inferior blooms produced. G. D. BLACK.

Time of Planting.

TO THE EDITOR:—

In the latitude of Philadelphia or New York City, how late is it safe or advisable to plant Gladioli for cut flowers? G. R.

Answer:—July 1st or about Independence Day is considered about the limit for planting Gladioli in the North Temperate Zone. However, some of the early blooming kinds might be planted still later as the average date of killing frosts in the latitude mentioned would hardly be much before October 20th. It will be found difficult to carry corms in good condition even as late as July 1st in ordinary frost-proof or cellar storage, and cold storage should be resorted to if planting is to be depended upon much later than June 15th.

Fertilizer at Blooming Time.

TO THE EDITOR:—

In the "Cultural Notes" of an English dealer's catalogue it is stated that—

"Two or three good soakings in June or July is a great help in dry weather. If for exhibition, draw a furrow three inches deep between the rows, and dust it with fertilizer, using about a dessertspoonful to each plant and water it slowly, but thoroughly in. This should be done at end of May, middle of June and first week in July, but not afterwards, as high feeding tends to retard blooming and maturation."

Can't some of the older and more experienced growers tell us whether this is good advice or not? I have been told that after the bud started on a plant one could feed it all it would take without harm. M. F. S.

Answer:—"Two or three good soakings in June or July is a great help in dry weather."

There is not a doubt of it.

The next sentence is equally sound if one knows his fertilizer. Only last year I scattered a little nitrate of soda on each side of a row of very precious Gladioli and hoed it in. Every one died, but small bulbs of the same variety that received no nitrate remained healthy although in the same row. Nitrogen not

only retards blooming, but it makes a luxuriant, sappy growth that is unable to stand up in a strong wind. Acid phosphate hastens maturity with no bad results. Potash produces a firm, healthy growth.

I usually dissolve nitrate of soda—one ounce to ten quarts of water—and have never been disappointed when using it in that way. This, however, is only applicable to small areas. When using it dry, as I usually do, one pound to the square rod, evenly distributed over the whole surface, is enough for one application. The same amount applied to rows three feet apart might do more harm than good.

M. CRAWFORD.

The Cleveland Florists' Club at its last meeting adopted a resolution offering its services to the Gladiolus Society of Ohio in connection with the flower show of the latter society to be held early in August. It is expected that this will be a great aid toward making the show a success.

Mr. L. Merton Gage, Secretary of the American Gladiolus Society, announces that he will not be a candidate for re-election at the coming meeting of the society to be held in Boston.

The Application of Mendel's Law in the Breeding of Gladioli.

(Concluded from page 100.)

white one, the offspring all came in different shades of red in the first generation, and all were large sized flowers; in the second generation the majority again came red, but a few came light colored and white with large sized flowers.

Such observations and others of the same nature have satisfied me that if accepted in a broad spirit, making due allowance for the recessive influences latent in these garden hybrids with which we must work, a study of Mendel's Law may be made very useful in working toward our result.

We urge those who are growing Gladioli to endeavor to make a display at the big show in Boston on Aug. 18, 19, 20. The schedule of prizes offered, which will appear in full in our August issue and which may be had on application to L. M. Gage, Secretary, Wellesley, Mass., is very complete, and will enable anyone who has planted a few hundred bulbs or more to compete.

American Gladiolus Society's Annual Flower Show at Boston.

Secretary Gage sends us a lengthy list of prizes which are offered by The American Gladiolus Society for a display of Gladioli bloom at the big flower show which will be held coincident with the annual meeting of the Society of American Florists and Ornamental Horticulturists in Boston, August 18-20, 1914. This will include many cash prizes as well as a considerable number of trophy prizes, consisting of cups and medals. These are offered in two classes, the Open Class, which may be competed for by both professionals and amateurs, and the Amateur or Gardener's Class which may be competed for by amateur growers only. This list will be published in full in our August issue which will be out well in advance of the show. Any Gladiolus grower who desires to compete will find the terms of the competition so liberal that there will be no reason for his not doing so. It is expected that the classes will all be filled and a big display of very high class bloom is looked for.

In order to have Gladioli for cut flowers up to the time that the first frosts cuts them, late planting is necessary, and as we have pointed out from time to time, this can be done as late as July 4th or even later. Unless a very early frost comes it is a fine thing to have plenty of bloom in late September or October. Besides, if you are growing for market, good Gladioli at about that time always command a fair price. We advise planting a good lot about July 1st and another smaller lot about July 10 to 15th, although in latitudes much north of New York City and Philadelphia the mid-July planting is somewhat risky.

Gladioli and Hardy Plants.

Under the above title Mrs. Austin in our June issue offered some suggestions about growing Peonies and Irises. As Gladioli are comparatively slow in coming into bloom, while waiting for them, the Irises and the Peonies are very desirable crops to grow for early bloom. Therefore, those who want flowers from early spring through until fall, will do well to refer to Mrs. Austin's article.

Both the Peony and the Iris are best planted in the fall of the year, as they start growth early; hence this suggestion is made at this time. People who grow Gladioli and who are interested in Peonies and Irises should write our advertisers.

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AUGUST, 1914

No. 8



GLADIOLUS—MRS. FRANK PENDLETON.

(For Description see Page 126 and Historical Sketch Page 120.)

American Gladiolus Society.

Schedule of Prizes Fifth Exhibition of Gladiolus Blooms to be held in Connection with the Annual Meeting of the Society and the Society of American Florists and Ornamental Horticulturists in Mechanics Hall, Boston, Mass., August 18th, 19th and 20th, 1914.

RULES.

No. 1. All entries must be made to the Recording Secretary not later than three days before the first day of the exhibition, on blanks provided by the Secretary for the purpose.

No. 2. Exhibits in competition for prizes must be of the exhibitor's raising.

No. 3. Exhibits must be in place 12 M. each day on which exhibits are to be judged.

No. 4. Exhibitors are required to keep their flowers in fresh condition during the time the exhibition remains open.

No. 5. Exhibitors will be awarded but one premium in each class in which they compete and then only where the exhibits on their merits warrant the judges in making awards.

No. 6. While the Society will take reasonable care of the property of exhibitors, yet it will not in any way be responsible for the loss or damage of anything exhibited.

No. 7. Exhibits after being staged cannot be removed until the exhibition is closed, without the consent of the Exhibition Committee.

No. 8. The Society requests exhibitors to attach labels to exhibits. Correct naming of varieties is very important.

No. 9. Exhibitors will be required to provide tables and everything else necessary for table decorations.

No. 10. In entering every exhibitor agrees to be governed by the rules.

NOTICE.

As all space has to be reserved in advance and paid for, it is very important that entries be made promptly.

The Society will provide space and vases for amateurs and private gardeners.

Professional growers and dealers will be required to provide their own space and vases.

When it is desired that exhibits be staged by the Society, notice should be

sent as early as possible to the Corresponding Secretary.

Exhibits by express should be addressed to American Gladiolus Society, charges prepaid, Mechanics Hall, Huntington Av., Boston, Mass.

Exhibits must be ready for Judges by 12 noon Wednesday.

SCHEDULE OF PRIZES.

OPEN CLASS.

GLADIOLUS BLOOMS.

VAUGHAN'S SEED STORE, Chicago and New York.

No. 1—\$10.00—Best 25 spikes Gladiolus *Mrs. Francis King*.

No. 2—Vaughan Silver Medal—Best 25 spikes *Chicago White*.

No. 3—\$5.00—Best 25 blooms Vaughan's New *Primulinus Sunbeam*.

E. E. STEWART, Brooklyn, Mich.

No. 4—\$5.00—Best 12 spikes of *Black Beauty*.

No. 5—5.00—Best 12 spikes of *Golden Queen*.

No. 6—5.00—Best 12 spikes of *Lucille*.

No. 7—5.00—Best 12 spikes of *Michigan*.

W. E. FRYER, Mantorville, Minn.

No. 8—\$5.00—Best 6 spikes Gladiolus *Mrs. W. E. Fryer*.

T. A. HAVEMEYER, New York.

No. 9—\$10.00—Best 6 spikes White.

No. 10—10.00—Best 6 spikes Pink or shades of Pink.

No. 11—10.00—Best 6 spikes Yellow.

No. 12—10.00—Best 6 spikes Blue or Lavender.

No. 13—10.00—Best 6 spikes Red or shades of Red.

No. 14—10.00—Best 6 spikes of any other color.

In judging, the following points are to be taken into consideration: Color, as clear as possible; size, large and well expanded bloom; spike, strong with flowers evenly set.

W. ATLEE BURPEE & Co., Philadelphia, Pa.

No. 15—\$10.00—Best collection 10 varieties 6 spikes each.

H. W. KOERNER, Milwaukee, Wis.

No. 16—\$5.00—Best 12 spikes *American Wonder*.

No. 17—5.00—Best 12 spikes *Twilight Chief*.

No. 18—5.00—Best 12 spikes *American Giant*.

JACOB THOMANN & SONS, Rochester, N.Y.

No. 19—\$5.00—Best 25 spikes of any white variety.

MONTAGUE CHAMBERLAIN, Wellesley, Mass.

- No. 20—\$10.00—Best White seedling 3 spikes.
- No. 21—10.00—Best Yellow seedling 3 spikes.
- No. 22—10.00—Best Pink seedling 3 spikes.

B. HAMMOND TRACY, Wenham, Mass.

- No. 23—Silver Cup for largest and best collection of pink Gladioli, not less than 3 spikes of any one variety.

BIDWELL & FOBES, Kinsman, Ohio.

- No. 24—Silver Medal for best vase of 25 spikes of *Panama*.
- No. 25—Silver Medal for best vase of 25 spikes of *Niagara*.

M. CRAWFORD, Cuyahoga Falls, Ohio.

- No. 26—50 bulbs of Gladiolus *White Lady* for the best red variety not before exhibited.

A. H. AUSTIN CO., Wayland, Ohio.

- No. 27—\$5.00—For the best Gladiolus corsage bouquet. Other flowers or green may be used to finish nicely.

AMATEUR OR GARDENER'S CLASS.

GLADIOLUS BLOOMS.

JOHN LEWIS CHILDS, Floral Park, N. Y.

- No. 28—For collection 10 vases Gladiolus *Childs* named varieties. First prize \$10.00. Second prize \$5.00.

I. W. KOERNER, Milwaukee, Wis.

- No. 29—\$5.00—Best 12 spikes *American Wonder*.
- No. 30—5.00—Best 12 spikes *Twilight Chief*.
- No. 31—5.00—Best 12 spikes *American Giant*.

NIGHT & STRUCK CO., New York City.

- No. 32—For vase containing 3 spikes Gladiolus *Mrs. Frank Pendleton*. First prize \$3.00. Second prize \$2.00.
- No. 33—For vase containing 3 spikes Gladiolus *Badenia*. First prize \$3.00. Second prize \$2.00.

THE MODERN GLADIOLUS GROWER, Calicum, N. Y.

- No. 34—Silver Cup valued at \$15. For largest and best display of mixed and named varieties, to contain at least 6 named varieties, correctly labeled. Three spikes each.

JOSEPH THOMANN & SONS, Rochester, N. Y.

- No. 35—\$5.00—Best 3 spikes of any white variety.

L. MERTON GAGE, Wellesley, Mass.

- No. 36—\$5.00—Best vase of 10 varieties, 1 spike each.

D. BLACK, Independence, Iowa.

- No. 37—60 bulbs *Golden King*. Best vase of yellow varieties.

J. MEADER, Dover, N. H.

- No. 38—Cut Glass Vase, value \$7.00. Best vase, 6 spikes of *America*.

AMERICAN GLADIOLUS SOCIETY.

- No. 39—Best exhibit of at least 15 varieties, 3 spikes each, correctly labeled. Silver Medal, first prize. Bronze Medal, second prize.

We hope that all will take hold and see the Boston show a big success, and at the amateur growers will get interested and send in a good lot of exhibits

and entries for their competitive classes. I request that entries be sent in early as possible. Do not wait until the last day or two before the show, but make your entries in such classes as you anticipate you can exhibit.

Even if you are not a member of the society you are eligible to enter your flowers for the prizes. *Read the rules carefully.* L. MERTON GAGE, Secretary.

PRIZE OFFER RECEIVED TOO LATE TO BE PRINTED IN SCHEDULE.

OPEN CLASS.

MRS. FRANCIS KING, Alma, Mich.

- No. 40—\$10.00—Best arrangement of Gladioli in basket or other receptacle not less than 20 spikes with two other flowers.

American Gladiolus

Society's Annual Meeting.

The annual meeting of the American Gladiolus Society will be held at 10 a. m. August 19th. The place of meeting has not as yet been determined, but it will doubtless be at some point convenient to Mechanics Hall on Huntington Ave. where the Flower Show is held. The place will be announced later. Much important business will be transacted, and it is hoped that all members attending the exhibition will arrange to be present.

Secretary Gage states that he has been assured that members of the American Gladiolus Society will be admitted to the exhibition hall free of charge. All intending to attend the show will please notify the secretary by postal card, addressing

L. MERTON GAGE, Secretary,
Wellesley, Mass.

THE MODERN GLADIOLUS GROWER has offered a silver trophy cup of handsome design to be competed for by amateurs only at the flower show of the American Gladiolus Society in Boston as scheduled above. We are also offering another cup in the "Open Class" to be competed for at the annual flower show of the Gladiolus Society of Ohio mentioned elsewhere in this issue. These cups will be beautifully engraved and make trophies much to be desired.

In the chief Gladiolus growing sections of this country temperature and moisture conditions have in general been favorable for rapid growth since the weather turned warm this spring. Those having irrigating systems have found very little use for them so far.

The Gladiolus Society of Ohio.

Preliminary Schedule of Premiums at the Flower Show to be
Held at Cleveland, Ohio, August 14-15, 1914.

THE AMERICAN GLADIOLUS SOCIETY.

Class 1—Best Display by Amateur, 10 varieties, 6 each. Silver Medal, first prize. Bronze Medal, second prize.

THE MODERN GLADIOLUS GROWER.

Class 2—Silver Cup valued at \$15.00. Best display, Open Class, 10 varieties, 6 each.

JOE COLEMAN.

Class 3.—Silver Cup. Best collection not less than 10 named varieties, 6 each.

THE GLADIOLUS SOCIETY OF OHIO.

Class 4—Certificate of Merit. New seedling or other variety, not before shown here, any color, grown by exhibitor, 6 spikes or more.

C. BETSCHER.

Class 5—\$5.00—Best collection Primulinus Hybrids.

THE H. F. MITCHELL CO.

Class 6—Bronze Medal. Best vase cut Gladioli, any varieties.

THE PERKINS-KING CO.

Class 7—100 Corms *Niagara*. Best vase *Niagara*.

MUNSELL & HARVEY.

Class 8—\$5.00—Best Vase solid White.

C. BETSCHER.

Class 9—12 Extra Named Peonies, value \$12.00. Best vase *Europa*.

Class 10—12 Extra Named Peonies, value \$7.50. Best vase *America*.

Class 11—12 Extra Named Peonies, value \$5.00. Best vase *Mrs. Francis King*.

Class 12—12 Homeroallis, value \$5.00. Best vase *Panama*.

Class 13—6 Homeroallis, value \$2.50. Best vase *Mrs. Frank Pendleton*.

Class 14—25 Corms *Europa*. Best vase *Glory*.

Class 15—25 Corms named Nanceianus. Best vase Florists' White.

Class 16—25 Corms named LeMoinei. Best vase Light Pink.

Class 17—25 Corms Named Pfitzerii. Best vase Rose Pink.

Class 18—25 Corms Named Childsii. Best vase Yellow.

W. ATLEE BURPEE & Co.

Class 19—\$5.00—Best vase Red, any variety, 10 spikes.

E. E. STEWART.

Class 20—\$5.00—Best vase *Michigan*, 10 spikes.

Class 21—\$5.00—Best vase *Black Beauty*.

H. J. ALFORD.

Class 22—\$5.00—Best new Seedling, any color, one or more spikes.

N. L. CRAWFORD.

Class 23—\$5.00—Best White Seedling, one or more spikes.

WILBUR A. CHRISTY.

Class 24—50 Corms High-class Named or Mixed Gladioli. Best vase Blue.

A. H. AUSTIN CO.

Class 25—Silver Cup. Best decorated basket of Gladioli for funeral use.

Gladioli.

When digging the Gladiolus bulbs in fall there are usually a quantity of small ones, so small that they scarcely seem worth saving. And yet they are too good to throw away. This year we had a present of a quart or two of these tiny things, many of them scarcely larger than a good sized seed, yet the friend who gave them said that it was from just such that she got a start and that she thought some of them would bloom the first season.

They were sown with a drill—thicker than we would do again. By mid-summer flower spikes began to appear and early in September that row was a blaze of beauty, including a number of different varieties, some of which were as beautifully marked as an orchid. They are of the Lemoine type, with smaller flowers than some of the others, but certainly proved well worth the care given, and we

shall remember in future not to throw away the wee bulbs, but treat them as seeds with which to brighten places where weeds might otherwise be allowed to spring up.

When taking up the Gladioli, choose a warm day in late autumn and take up the entire plants, spreading them where they will dry, and in a few days, after they are well cured, cut the tops off an inch above the bulb and pack away in a dry, frost-proof place during the winter. If the cellar is damp, a closet may be preferable. When replanting in spring, make several plantings a couple of weeks apart to insure a succession of bloom; that is, if the bulbs are of large size. But if the tiny ones are used, they will vary so much in size that the bloom will be continuous from mid-summer until frosts come.

BESSIE L. PUTNAM in

The National Farmer and Stock Grower.

MRS. AUSTIN'S TALKS FOR
AMATEURS.NO. 7—GLADIOLUS IMPROVEMENT AND
EXHIBITIONS.

It is the height of the season. The standard varieties and many in the test plot are in bloom. By the way, our test plot has a new name. We were quite amused one morning to overhear the children in our neighborhood talking very seriously about Gladiolus growing, and Gladiolus business prospects, and expressing their opinion as to the value of our "pet plot," and that it would be considered a special treat to visit it. They were promptly invited on a tour of inspection, as we consider their unbiased opinions of value, and professionals never showed greater or more critical interest. Having assisted us many times, and being familiar with the standard varieties they were quick to notice new form or coloring, and not at all backward in expressing their judgment of them.

In looking at the many varieties for trial in the "pet plot" there seems no room for improvement, that the pinnacle has been reached, but would we not like a variety similar to the beautiful *Mrs. Francis King* with the added elegance of ruffled petals; would not a white primulinus be very useful, and what would be the value of a large wide open yellow, the same golden shade as primulinus? Oh, yes, the field for improvement is as wide as ever. Probably some of us made a start in that direction when we purchased a few each of several choice varieties last spring. One should make a study of the traits or characters of the varieties to be used for crossing. While it is usually advisable to use the largest and finest varieties, sometimes there are small and inferior looking ones that have features of special value for breeding purposes. For instance, we know of a variety which grows very tall, has a long blooming spike and five side branches, every one of which is nearly as long as the main spike of many varieties. The well set blooms nearly all open at one time and are somewhat fluted, but very small and an undesirable color, few people would give it a second glance. However, its good traits outnumber the bad ones, and by choosing for the other parent, one of the new large flowering types such as *America* or any that will breed true or as nearly pure character as we can expect in the modern hybrids, we may hope for something good in the second hybrid generation. As it

requires at least two years for the first hybrid generation bulbs to come into bloom and another two for the second generation, it is well to be sure of a wise selection of parents. One seldom realizes the ideal in mind when making the crosses, but nature is full of surprises and we are quite likely to receive something equal, if not more beautiful or unusual. However, if the blooms are not as fine as we had hoped for, we will be repaid for our trouble in observing the different characters and combinations.

We will now take the first step by selecting for the seed bearer, a strong, sturdy variety, cut the spike so as to leave not more than four good buds. When the first bud is about ready to open we will carefully fold back the petals enough so as to remove the anthers, then cover with paper or muslin bag. It may seem unnecessary to emasculate and cover the bud before it opens, but in view of the number of years it will be necessary to grow the seedlings before the blooming of the new hybrids, it is well to take extra precaution. An inquisitive bee covered with pollen will often work his way into a bud before it is open and is quite likely to leave pollen grains where they may be taken up later. Self-fertilization is also sure to be prevented. If our stock of the variety chosen to furnish pollen is limited, we will also cover the buds to prevent loss by bees or wind. When the blooms are well advanced, with the point of the small blade of the Gladiolus knife, we apply the pollen to the mature stigma.

As the hybridization of Gladioli has been taken up by many in the past few years, new varieties are introduced each season. We hope to see many of them at the coming exhibitions, so if you have one or a hundred seedlings that look good to you, bring them out and let the public see them and let people know you are growing *Gladioli*.

The Gladiolus Society of Ohio has a good schedule of prizes for its exhibition in Cleveland, Aug. 14-15, with competitions open to all. The next week, 18-19-20 of August, is the great show in Boston by the American Gladiolus Society which has a special class for amateurs. Do not hesitate to bring in the choice varieties for both societies, as every one interested should lend a hand for its publicity. Having begun growing them, ones interest increases each season, and if you are not a member of the societies you surely will be ere long. They are too educational to miss. At the exhibitions we learn different ways for arranging the blooms and new uses are created which in turn in-

crease the demand. Let the retail florist make up a piece using your pet seedling, and thus advertise its beauty.

Yes, come and bring your flowers. Let us have the greatest exhibitions ever.

MRS. A. H. AUSTIN.

Securing Early Gladiolus Bloom.

BY M. F. WRIGHT.

Having written the editor that I secured Gladiolus bloom by June 18th with regular outdoor culture, he has asked me to tell about it, and I am pleased to do so, hoping that it will help others who are interested in growing for an early market. The Gladiolus is my favorite flower, and anything from my experience which will help others I will be very glad to furnish.

I want to say, first, that there is no secret about my method, and, second, I do not want the readers of THE MODERN GLADIOLUS GROWER to think that I am boasting because of the fact that I secured an early cutting of bloom this season.

The first variety to bloom was *Pink Beauty*, and I secured this in sixty-two days from the time of planting. Spikes with a full flower were cut and with two more nearly open. My planting was made April 17th, and the first cutting of bloom was on June 18th. *Hally*, planted the same day gave bloom for cutting on July 2nd, which is two weeks later.

My Gladioli are being grown on clover sod land this season, as I always do, if it can be arranged. Sod ground has plenty of humus and nitrogen and other elements that encourage plant growth, especially the Gladiolus. Besides there are less weed seed, which saves a great deal of work, but this does not mean that cultivation should be neglected. Cultivation should be kept up at all times, as this is the only substitute we have for an irrigating system here in Indiana.

It is customary for me to plow as early as the ground can be worked and not have it pack or cake down. This can be determined by noticing whether it will crumble nicely when it leaves the plow. If possible I back furrow the ground so as not to turn the team on the plowed ground any more than necessary. The ground should be well harrowed and smoothed down level, and it is well not to plow too much ahead of the actual planting.

My rows of Gladioli are twenty rods long, and I get about 1,000 bulbs in a row, or about four inches for each bulb. This is for first size bulbs. Smaller bulbs would require less space.

The *Pink Beauty* bulbs had started sprouts from one to two inches in length, which I believe is an advantage for early bloom, as they were soon out of the ground. I commenced to cultivate as soon as the sprouts showed above ground, and kept it up at least once a week. No fertilizer was used on them, but I had them in a good, rich soil, and as soon as they were up they kept on growing as though they were anxious to show their beauty as soon as possible. With us the growing season this year has been favorable for Gladioli as for other farm crops, and this, of course, has been an advantage in favor of early bloom.

Massachusetts Agricult'l College.

The Department of Floriculture of the Massachusetts Agricultural College is to have a booth at the S. A. F. Convention in Boston. Professor A. H. Nehrling, head of the Department, will be in charge, and he will be glad to give information on any point concerning the work of the College, its courses and equipment. Illustrated pamphlets may be obtained at the booth telling of the work of the Department of Floriculture. The Department was established in 1906 and has the proud distinction of being the first of its kind in this country. By many, especially from the standpoint of the eastern grower, it is considered the best equipped institution for floricultural work.

We are in receipt of a box of cut blooms of several varieties of Gladiolus Nanus from W. W. Wilmore, Jr., Wheatridge, Colo. These were sent on June 25th by express, and did not reach us until July 2nd, exactly one week from date of shipping, and were, therefore, pretty well bloomed out before being received. This long time on the road by express is perhaps a suggestion to shippers of cut flowers. Certainly Parcel Post would have made it in half the time, and it is seldom indeed that mail does not go through in one-half the time.

The varieties of Gladiolus Nanus which Mr. Wilmore sent are very interesting, and it is our intention to grow a few of these another year for early bloom.

Our "Queries and Answers Department" this month contains its usual fund of valuable information and we are holding over a large number of valuable contributions which could not be used on account of lack of space.

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
PUBLISHED MONTHLY ON THE FIRST OF THE MONTH BY
MADISON COOPER, CALCIUM, N.Y.

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OUR MOTTO :

Special favors to none, and a square deal to all.

Canadian and Foreign
Subscription Price
75c. per year

Growers are invited to contribute articles or notes over their own signatures, but the Editor reserves the right to reject anything which in his judgment is not conducive to the general welfare of the business.

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Vol. I.

August, 1914

No. 8

Cycle of Plant Growth.

The answer by Matthew Crawford to "G. A." in our "Queries and Answers Department" this month is especially interesting, from the fact that it explains that full maturity of corms, bulbs, etc. is not necessary for successful growth. As an amateur grower of a comparatively few years' experience this fact has been forced upon our attention in connection with the Gladiolus. It really seems to make very little difference where the period of growth stops. If the corm or bulblet is lifted and dried for a time it seems ready to take up its life's history again where it left off and continue it. Whether it is safe to say that this can be depended on without some drawback or penalty we are not at this writing prepared to state, but it would seem that plant life which has a certain cycle of growth, including a period of rest, must be allowed to go through this cycle, at least approximately, or some penalty will be exacted. It does not seem probable that Gladiolus seed may be planted indoors in the fall of the year, for instance, and the growing plant removed to the outer air in the spring, and have it continue its growth so as to get two years' work into one, as it were. This suggestion, however, is largely the-

ory, and it may be practicable to do something like this without detriment to the plant or bulb in any way. It is certain that continuous growth cannot be sustained, as the period of rest seems absolutely necessary even though it be but a short one. MADISON COOPER.

To give proper justice and show proper respect to those hybridizers who have gone before us, we should not consider the naming of new varieties unless of distinct merit and distinct characteristics. It should be a rule not to name a new variety unless it has special merit and is an advance over other varieties of its general type and characteristics. We already have too many mediocre varieties and those between which there is very little difference.

Make an Exhibit.

A special effort should be made by all growers who have sufficient stock coming into bloom at the right time to send an exhibit to the numerous fairs and flower shows which occur during the months of August and September. There is an opportunity for prize winning, but a more important thing is the fact that every spike of flowers sent to a fair or flower show helps to popularize the Gladiolus

and introduce it to the flower loving public. Therefore, do your share along this line, even though you do not expect to win a prize. We cannot all win prizes, and true sportsmanship tells us that we should strive even though we cannot win. As striving gives us strength we are likely to do better another time. By all means attend the flower shows and contribute your share to the exhibition. It is extremely educational not only to others but to yourself as well.

Gladiolus

"Mrs. Frank Pendleton."

In the summer of 1908, Mr. L. Merton Gage visited me in Boston, and showed me a spike of what I at once considered the finest pink Gladiolus that I had ever seen. I waxed so enthusiastic about it that I plied Mr. Gage with questions as to his source of supply, and he informed me that it was a seedling of Mr. Kunderd's of which Mr. Kunderd did not think as much as some of his others and that if I made overtures to Mr. Kunderd I could possibly buy the whole stock. I did not lose much time to do as suggested, and in short order I had a reply stating that for the consideration of a certain very reasonable sum, we could buy the entire stock, but that the stock was very limited, considering the number of large bulbs available. He also conveyed the information that Mr. L. Merton Gage had some of the stock. The stock was bought by us, and as the variety was not yet named, we also secured the right to name it. In 1909, we planted the stock and when the first flowers appeared we exhibited them before the Massachusetts Horticultural Society, where they received the reward of "Certificate of Merit." They were still then under number. Exhibited at Newport, they were awarded a "First Class Certificate" and finally I carried a quantity of flowers to the Flower Show at Bar Harbor, Maine. Here the ladies were so enraptured with it, that for hours they surrounded my exhibit. The judges had awarded it a first class certificate which simply helped to increase its popular favor with the ladies. Mr. William Dreer, the well-known seedsman, who is a resident of the summer colony, happened to introduce himself to me and complimented me on this wonderful Gladiolus. Finally, six of the ladies entreated me that the Gladiolus should be named after one of the ladies of the Bar Harbor colony. I

asked them to suggest names, so one of the ladies happened to think of a splendid idea, namely, that they would introduce to me during the afternoon a number of their friends, all who are acknowledged to be great flower lovers, and from these I should pick the one in whose honor the flower should be named. I agreed, not knowing just then in what a peculiar predicament I placed myself. I soon found out. The first lady who was introduced to me was Mrs. Pendleton. If there is a man living who could have refused the pleadings of that lady, I would want to know him, and so I capitulated at the first storming of the citadel. From that moment on, the Gladiolus was known as *Mrs. Frank Pendleton*.

Our supply of saleable bulbs for the coming year was rather limited, and so I arranged with Mr. Gage to exchange his large bulbs for a satisfactory number of our small stock. This enabled me to introduce it in 1910. In May of 1910, our surplus together with the remaining small stock was planted out at Marblehead, Mass. In July of that year, my employer merged his business with two others into a trust, and coincidentally I left his employ. The management of the merged concern looked with disfavor upon my former activity in producing or introducing novelties, and their very first act was to destroy a field which contained mostly seedlings and all the small stock of Gladiolus *Mrs. Frank Pendleton*. Had it not been for the fact that Mr. Gage had part of the stock, the variety *Pendleton* would have never been heard of again. I pride myself on an ability, viz., to see merit where it exists and from the very beginning, I predicted that this novelty had a glorious future. I am proud of the fact also that I was instrumental in introducing it to the public at large and many years will pass before this variety will be relegated to the background. The unusual demand for it has kept its purchasing value beyond the reach of the ordinary gardener, but it will soon come within purchasing power of all, and then I hope to see it the crowning glory of every garden.

MAURICE FULD.

Some people recommend that when harvesting Gladiolus corms the stalk be allowed to remain on the corm until the corm is cured, probably for several days. This we believe to be contrary to best practice, as the stalk will draw moisture and juices out of the corm, reducing its strength and vitality. We, therefore, recommend that the stalk be cut off promptly within about an inch of the corm.

WAYSIDE RAMBLINGS.

ON ARTICLES IN JUNE ISSUE.

TO THE EDITOR:—

Here are a few remarks concerning articles in your June number:

Article by C. A. D., page 90, A. H. Austin Co. are right as to No. 2 bulbs, as I take it that their staple sort is *America*. This sort to give best results must be large, others, such as *Mrs. F. King*, *Niagara*, *Independence*, *Augusta*, and about all the Groffs, will give splendid results from small stock. We had no flowers at the Cleveland show of the Ohio Gladiolus Society from bulbs larger than one-half inch. By the way, why not publish winners at that show, giving your readers an idea of what sorts are getting recognition at the shows, also who is growing them?

Your remarks concerning difference between *White Lady* and *Rochester White*, page 88: We found marked difference in plant the first season we had *Rochester White*, but hardly any the second. As bulbs were from entirely different climate and soils, we attributed difference to conditions under which bulbs were grown. This season we had quite a debate as to whether we would dump them into one lot. We still have them separate.

I do not doubt Mr. Thomann's statement that *Rochester White* is a seedling, in view of our experience with seedlings from Groff stock. In one lot of not more than 2,000 we had over fifty that could have been run into our *Taconic*, about ten that answered nicely to description of *Meadowvale*, and several that came very close to other Groff sorts, so close that we sold them at once in mixture. I know that the above were seedlings and that they were not named sorts thrown into the seedlings as I handled them personally from start to finish.

Mrs. F. C. Warncke, page 94, has a disagreeable experience coming if she has cut any of the shy producers of weaker sorts. We have tried many ways of increasing, among them splitting. Find this method will increase the strong growers, those that will increase anyway, but results were different when applied to such sorts as *Europa*, *Lily Lehmann*, *Liebesfeuer*, *Blanche*, *White Lady*, *Contrast*, etc.

We have had trouble with the carpenter bee on roses, (C. A. D., page 90), about all of it on the yellow hybrid teas, such as *Lady Hillingdon*, *Blumenschmidt*, etc., but never enough to try to find a cure.

R. E. HUNTINGTON.

COMPARING VARIETIES OF GLADIOLI.

SINCE THE MODERN GLADIOLUS GROWER has been established there have been several people who have indulged in a discussion with reference to the varieties *Rochester White* and *White Lady*. Some seem to think that they are the same, and others seem to think that the varieties are different. When a discussion is between two reasonable men nothing can be settled without proof, and it only creates discord, and as you welcome an exchange of ideas I have the following suggestion to make:

Get those who believe *Rochester White* is different from *White Lady* to furnish bulbs of this variety for trial, and get those who believe *White Lady* is the same as *Rochester White* to furnish bulbs of *White Lady* for trial. Three bulbs planted in a good sandy loam and carefully marked would be sufficient. When they come into bloom, note them carefully for quality of foliage and character of spikes, etc. Also make a record of the way spikes open. Call in two of your friends who are capable of judging and make careful comparison.

As a check, two different lots of three bulbs each grown under the same circumstances in different localities, would be advisable and records secured from different people. You can then publish your findings and be sure you are right. This, it would seem, will settle the matter among your readers.

One of our methods with rare bulbs which is absolutely safe and not possible to make a mistake, is to plant each bulb in a six or seven inch pot for the large size bulbs, and sink them in the ground. They may be marked with a lead or zinc tag fastened to each pot, in view or not, as desired. They may be treated otherwise the same as regular field plantings. You can in this way compare matters and make actual count of small cornels or bulblets that each can produce. There is no guess-work about it and no loss, and each lot is under absolute control.

CHAS. F. NEWELL.

INDUCING RAPID INCREASE.

The only means I know of "Inducing Rapid Increase" is to plant very early in the spring in a soil which does not induce an early ripening off of the corns, and to let them continue growing until the threatened arrival of freezing weather. Some soils ripen the plants very early in the season, others only barely have them ripe in time for winter. As near as I can tell from my experience a soil treated

with limestone (or lime) ripens them early, and an acid soil slowly.

Early planting, with the resulting leisurely start of the planted corm, permits a large stand of spawn, and the longer growing season gives all of its time to develop strength the first season. The same conditions make the spawn develop sooner to blooming size when planted out, and make it more productive of new spawn while growing. B. F. AUTEN.

DOWN IN SOUTHEASTERN MARYLAND.

I have been much interested in your clever little magazine, and concluded to send you a few notes from down this way. I am not a large grower of Gladioli, but have between two and three thousand every season. My first bloom this season was cut June 25th from a lot of Groff mixtures, which, like all mixtures, have run into one or two varieties in several years' propagation. I shall get rid of them and hereafter grow only to name. At this date (July 8) few named varieties have bloomed, no *Americas* yet. The first of the named sorts to bloom were *Sulphur King* and *Charlemagne*. *Niagara* and *America* are just showing spikes. If all the varieties would increase like *America* and *Mrs. Francis King* there would be no difficulty in getting up stock of any. But there are many varieties that not only make few cormlets, but those that are made seem hard to germinate. One of your correspondents speaks of soaking the corms. I think that I will try that with some of these slow germinating sorts. In fact, I shall another winter keep the cormlets in sand to prevent their getting so hard. In my garden the Gladioli are rapidly becoming weeds. Here and there I find a strong spike from a corm that was missed in the digging last fall and all over the garden where any Gladioli have been grown the cormlets are growing like wheat among the vegetables and, of course, have to be hoed out like other weeds. Volunteers of various kinds bother me, and one often hesitates about chopping out a flowering plant. The ground where my Gladiolus plot is this year was in China Asters last year, and there have been lots of volunteer asters which one hated to destroy. Seedling Dahlias that I did not find worth keeping over, were left where they grew, and are now up smiling and growing strongly, and even the Moon flower, which fails to ripen seed North, drops its big seed and comes like the common Morning Glory. In fact I rather think that some of the more refractory corm-

lets of the Gladiolus had better be sown in the fall. I shall try some of the more prolific sorts in this way as a test.

W. F. MASSEY.

BETTER PRINTING.

In my July number of THE MODERN GLADIOLUS GROWER I have read with pleasure the reply of S. E. Spencer to Mr. White pertaining to better printing of the various trade papers and catalogues, but wish to take sides with Mr. Spencer in the clinching arguments he uses for the good of the trade in every line of business. I am the recipient of a large number of catalogues from different sections of the country every spring and fall, each one of which I scrutinize from cover to cover, and in a few turns of pages I can tell at a glance which ones are of the artistic class and which ones are of the "Cheap John" class. You may take the catalogues of two firms in the same business, each showing by illustration the same identical rose or gladiolus. The artistic catalogue with its glossy pages of enamel paper and its high class half-tone photo engravings brings out in bold relief the minutest detail of every leaf and flower, and the reader is at once charmed with the true and perfect likeness before him. Then turn to the pages of the "Cheap John" production. The identical same rose or flower appears on its cheap straw paper of the ordinary newspaper type. And what do we find? Instead of a bright, sharp and cleanly cut collection of photo engravings of the highest grade, the illustrations are mainly reproductions of old worn out wood-cuts and only fit for the junk pile, and lend no charm to the reader, except a slight difference as to the price, but only in a very few instances. All first class business houses see to it that their office stationery is of the first class, then why not have our various trade catalogues a thing of beauty and artistic taste rather than that of the cheaper grade for the sake of a few odd dollars that may be saved in printing but lost in trade.

R. J. PATTERSON.

This issue of the THE MODERN GLADIOLUS GROWER is giving special attention to Gladiolus exhibits. The prize schedules of the American Gladiolus Society and The Gladiolus Society of Ohio are given in full, and the G. D. Black article as well as Mrs. Austin's Talk applies especially to the Gladiolus shows, and at this season of the year these are quite timely. Read how others do it and emulate the example yourself. It is educational and helpful.

Gladiolus Exhibits.

By G. D. BLACK.

IT has been only about seven years since we made our first exhibit of Gladioli at the Iowa State Fair. At that time we were not extensive growers. We had only about one-fourth of an acre, which consisted mostly of our own seedlings and *Independence*. We showed only about five hundred spikes, half of which were *Independence* that had been selected from Groff's hybrids. This variety made such a favorable impression on the officers of the Iowa Seed Company that they gave us an order for several thousand bulbs and introduced it as a novelty the following season. It was at that time and place that we named it *Independence*.

Our seedlings attracted much attention because many of them were yellow and blue; colors that were rare at that time. In front of about two hundred of them we placed a large card stating that "These flowers were grown from bulbs about the size of peas, that were grown from seeds the previous season. In a lot of ten thousand we have not found two spikes with flowers exactly alike." About a dozen vases of named varieties and a few of Groff's Hybrids completed the exhibit. Each year we have tried to improve our exhibits, profiting by past experiences.

We should always remember that an exhibit should be educational by showing to the people the improvements that are being made. Only a small proportion of our population has seen the improved forms and colors of the modern Gladiolus. Our state and county fairs are perhaps the best opportunities we have to introduce the Gladiolus and increase the sale of bulbs. Last season we had some neat cardboard posters nine by twenty-two inches printed like this:

GLADIOLI

GROWN BY

G. D. BLACK & Co.

Independence, Iowa.

Order your bulbs now, while you have the flowers to select from.

We placed these around our exhibits in front of the vases so that they could be seen from all sides. This suggestion gave us more orders than usual and also informed the public what we were exhibiting and by whom and where grown.

Neighbor Woodruff and myself camp on the State Fair Grounds and occupy the same tent. Although we are competitors for the first and second premiums amount-

ing to \$45.00, we can be of mutual benefit to each other in securing orders and in many other ways.

We try to live up to the motto, "Boost the Gladiolus and it will boost you."

I can not refrain from saying a word of caution to the inexperienced. Never say anything against your competitor. It may do him harm, and will in nearly all cases do more harm to yourself than to him.

Although we are obliged to ship our flowers by express about two hundred miles we have always felt that we have been well repaid by the pleasure that we have in showing the beauties to others, as well as the added business that we get. Those who have favored us with orders in former years do not forget to visit our exhibit and order some of the new creations we have to show them.

The Gladiolus fever seems to be very contagious in the vicinity of a large exhibit of the flowers and is generally incurable as can be proven by the cases of friends, Crawford, White, and a score of others I could name.

We expect to greatly increase the number and amount of our orders taken at our exhibits by offering THE MODERN GLADIOLUS GROWER as a premium. Many do not order bulbs because they fear they will not know how to grow them successfully. This condition will be corrected if we give them THE MODERN GLADIOLUS GROWER as a guide. By helping our customers to this information we are helping THE MODERN GLADIOLUS GROWER to a larger subscription list. This helps to popularize the Gladiolus and by helping to popularize the Gladiolus we are really helping ourselves.

We find it is not necessary to cut spikes with more than the two upper blades of foliage for use in a large general exhibition except in special cases. It is too expensive to ruin two or three thousand bulbs of our choicest varieties by cutting away most of the foliage. If cut when the first bloom is open most varieties will make a good exhibit for a week or longer. During a dry, hot season they will bloom much better in the vase than in the field. If they are liable to remain in the shipping crates more than twenty-four hours it is best to put them in tin cans containing some water. To keep them in good condition it is necessary to remove the withered blooms and a small portion from the base of the spike each morning.

(Concluded on page 129.)

Some Gladiolus History.

Written from a Holland Grower's Viewpoint.

By P. Vos Mz.

LOOKING into the history of the Gladiolus, if ever the well-known phrase of Caesar, "Veni, Vidi, Vici," ("I came, I saw, I conquered") was true, it is absolutely so in the case of the Gladiolus. There are no species of flowers which have been developed in such a short time through radical improvement, and become so generally known and used, the world over, as the Gladiolus. We only knew some few years since a few species, and from them a few garden sorts, but in recent years expert growers have brought into commerce so many novelties that we are astonished at the richness of color and the noble forms that the families of Gladioli assume. It is only necessary to compare the flowers of the well-known family of the *Gandavensis* of about twenty-five years ago with the same family now to perceive this clearly.

We can divide the Gladiolus roughly into two groups, those which flower early and those which flower late. Almost without exception those that blossom early, bloom low with short flower spike, while those which blossom late have great long flower stalks and large heads of bloom. The Nanus varieties are the most important species of those that blossom early. The various varieties of the early blooming species are, at present, exported in great quantities, although they are not so important as the late blossoming. The flowers are especially suited for decorations in vases, and are also very beautiful in artistic floral decorations. We have a number of new sorts acquired during late years in this group, but yet the old and well-known *Blushing Bride* and *Peach Blossom* take the first place. Because the culture of Nanus varieties is easy they are well-known and esteemed in the season between the early and the late blooming Gladiolus, along with the well-known Gladiolus *Colvilli*. The type of this special variety came from the farm of Mr. Colvill a cross of Gladiolus *Concolor* with Gladiolus *Cardinalis*. It was brought into commerce in 1823. The flowers are of a violet red color, and the border of the flowers has fine white spots. About 1872 this hybrid sported at the same time in two forms at Overveen near Haarlem, and a white flower variety appeared. The flowers of this new variety were pure

white, only the stamens retained the color of the old hybrid. This sensational novelty was surpassed by a sport some years later of an entirely pure white form, in which even the stamens were changed from a red color to white, so that there was produced a perfectly pure white flower, which is known in commerce by the name of *The Bride*. Gladiolus *Colvilli* and *The Bride* are at the present time, still in great demand, owing to their free flowering, and because they bloom so early, and can be cultivated and sold in great quantities.

We will now consider the late blooming sorts, the most important group of the Gladiolus. We could divide this important group into different sections, but we will not do so, because professional men in the cultivation of bulbs, and especially the most important growers of Gladioli, are all of the opinion, that even if the different families in early years were separate, these are now mutually blended. It appears also that the commission at Haarlem share this opinion, for they employ no more the early division in describing the new varieties. Also, it was decided at our meeting of the National Gladiolus Society in 1912, to recognize only two groups of Gladioli, the early blooming and the late blooming ones. Our American friends seem to follow the same system.

The Gladiolus is a true international flower, cultivated by preference, in all civilized countries, and although we are thankful when we find that many of the best and newer varieties have Dutch origin, yet we cannot deny that many of the beautiful and distinguished kinds are of American origin. In England and Germany, we know especially that at least one house in each country has brought into commerce some of the best varieties.

Lilly Lehman and *Halley* are very good kinds of Gladioli; the first is of a fine rose color, almost white, with beautiful strong branch flowerstalks, and is a good multiplier. *Halley* has a rose salmon color with fine flowerstalks, well formed, and is fully opened early. This variety, one of the strongest sorts, takes a first place in the modern flower arrangements. These two varieties, *Lilly Lehman* and *Halley* were obtained in a sowing by a well-known grower of Gladioli at Noordwijk.

More generally known are the varieties *Baron Jos. Hulot* and *Willy Wigman*. The supply of these two sorts can be procured from our well-known growers of Gladioli. Some of the leading growers in America have bought in Holland the last years and they gave very good results. *Baron Jos. Hulot* is of the dark violet color, which is the color that seems to take with the public, so that the cultivation of this sort is carried on continuously by the Gladiolus growers. *Willy Wigman* is one of the blush-white Gladioli; the lowest flower-petal is marked with a fine crimson blotch. For fine vase bouquets, this sort can be especially recommended.

Cleare Eye is a great improvement over *Princeps*; it is a tall robust and strong grower, long spikes, broad dark green foliage, large flower of deep scarlet, very large bulb and is a strong multiplier.

Although there are not so many white Gladioli in our Holland varieties we may mention *Glory of Holland* with two and three flower spikes to the bulb. In every show where it was exhibited it received a Reward of Merit or a first class certificate.

Badenia has a distinct lilac color never seen before in Gladioli; this color is such an exception in Gladioli, that in every show where it has been exhibited, it was highly appreciated and admired. It is too bad that this variety cannot be grown in every soil. Every grower should try it first, before he buys a large quantity. Some growers here in Holland have no trouble in growing it, but others have bad results.

The early blooming Gladiolus *Pink Beauty* also of Dutch origin, in a few years solely on its merits, has acquired almost a European and American reputation. This is, without doubt, owing to its early blossoming and that the flowers come out just at a time when there are so few flowers fit to cut, and this augments in a great measure the value of this special sort. As a proof, every year in The Hague the first class shops have a supply of flowers about the middle of April.

From *Pink Beauty* we got a sport of a wholly new variety, to which we have given the name of *Pink Progression*. Without doubt this flower has a great future, for it blooms at the same time as *Pink Beauty* and the color is much lighter, which is of the finest rose. The last two years the only trade has been in bulblets among the growers, but now there is a little stock of large bulbs, therefore some growers have placed it in their catalogues. We advise everyone, who takes an interest in a truly new extra fine variety, to

buy it, for we are sure that they will highly appreciate it.

In the foregoing we have spoken of the most important and best known Gladioli in Holland. We could easily augment this series, but shall not do so, but will take up the Gladioli imported from other countries. It is not necessary to mention the variety *America*, for it is well known by professional and amateur growers over the whole world. Two years ago we made acquaintance with another variety from America, probably a seedling of *America* which is named *Panama*. Rarely has a Gladiolus been brought into the trade which has at once made such progress as *Panama*. The color is salmon rose, and is still more agreeable than that of *America*. Without doubt *Panama* has a great future. The first importers, only a few growers, have made considerable money out of their first imported bulbs as well as their imported bulblets, but the quantity imported was so great that the buyers could hardly get one-tenth of the money they paid the year before. But anyhow, we are assured that those who are making stock of *Panama* will get their money back, for it will become one of the best Gladioli in the trade.

Of American origin is the beautiful *Niagara* with its nankin yellow-colored flowers, and gives a welcome complement to the other Gladioli. *Niagara* is good for cultivation, and there will soon be sufficient to supply all demands.

Mrs. Frank Pendleton, also from America, is one of the most beautiful Gladioli; the flowers are very large, well expanded, of a lovely flushed salmon-pink with brilliant carmine, or deep blood red blotches in the throat. There is no doubt about this variety remaining one of the best in the trade. The best proof is that it was certificated in Haarlem as well as in London.

We may say the same of the variety which was imported last year, *Golden King*, color a bright, glistening, golden yellow with vivid crimson blotch in throat. We received some 50 bulbs from a friend in America, and when it came in flower we considered it one of the best yellow Gladioli.

Speaking of yellow Gladioli we must not forget the beautiful Gladiolus *Schweben*, a German introduction. This is a very, very fine novelty; the spikes are very strong, and bulb produces three spikes with six to eight flowers open at one time. The color is a fine canary-yellow with a brown carmine blotch in throat.

We must finish looking into the Gladi-

olus, yet it would not be difficult for us to speak about a great number of other new sorts. We have taken into consideration the most generally-known varieties, but before we finish we want to mention the early white variety imported from America, *Chicago White*. This variety and *Glory of Holland* we consider to be the best whites. They may say that *Europa* is the best white, but of what use is it to have a beautiful flower when we cannot grow it?

The desire to bring good varieties into commerce is increasing every year, and the demand for Gladioli by the flower-loving public is on the increase, which is the whip to urge on the growers to aim at perfection in this beautiful species of bulbs. That it will be the Holland and the American Growers who will stand in the head class, seems to us a certain thing.

We hope that THE MODERN GLADIOLUS GROWER will contribute towards helping still more the love for the Gladiolus that exists in the hearts of the public of all civilized countries.

Gladiolus— “Mrs. Frank Pendleton.”

(Subject of illustration on front cover.)

The colors of this variety are bright pink, of two shades, and rich carmine, the latter appearing in a patch on the lower petals.

The blossoms are large and of graceful lily-like form and combine effectiveness as cut flowers with effectiveness as garden decorations.

From the midst of wide and richly colored leaves, the spike rises tall and strong and the entire plant betrays health and vigor. It is easily grown and multiplies rapidly.

The cut we present on our front cover page is not a fair example, as these spikes were produced from small bulbs five-eighths of an inch in diameter.

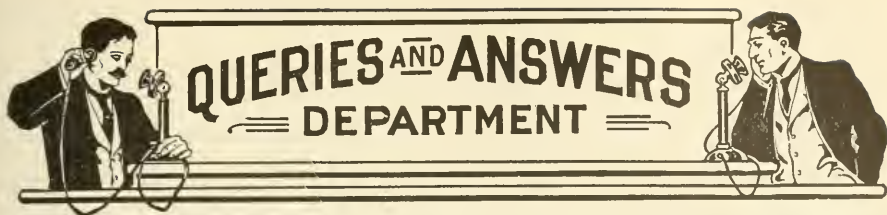
A. E. Kunderd of Goshen, Ind., who originated the variety *Mrs. Frank Pendleton*, writes us that he originated this variety while working along the line of evolving his large flowered ruffled kinds. *Pendleton* did not show the wavy petals, but its other characteristics are so striking and meritorious that it has come into prominence. Mr. Kunderd sold his stock of this variety in 1910 to an eastern house, reserving but a few bulbs, but he has since bought back considerable stocks of it. It is always interesting to know the

complete history of a variety, and the fact that Mr. Kunderd did not know how good a thing he had produced, is also interesting. As he was working on the ruffled petal idea, he did not at first appreciate *Pendleton* at its true worth.



A Single Spike of Gladiolus
MRS. FRANK PENDLETON.

Some varieties of Gladioli produce large spikes of bloom from small bulbs. The variety shown above is one of this kind. It is a very rapid increaser, and this is one of its many valuable qualities.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Growing Gladioli for Cut Flowers.

TO THE EDITOR:—

My attention has been attracted to the possibilities of growing Gladioli for cut flowers, and if any of your readers can let me know how and when as well as method of selling the flowers from an acre of land, I would appreciate it very much.

Would it be advisable to plant an acre all at one time or at different periods, in order to bring on the bloom at different times to supply the market for cut flowers?

Would it be possible to sell the flowers from an acre if located some distance from a large city?
F. B. R.

Answer:—In answering above inquiry it is our intention to talk right from the shoulder and to not elaborate on the commercial possibilities of Gladiolus growing as “a flowery bed of ease.” It is a foregone conclusion that everybody should beautify their home surroundings with small plantings of Gladioli. But to take up such a work, grow an acre of blooms for the cut flower trade, means that one could do little else and unless otherwise blessed would have to depend on the crop for a living. Besides the large amount of work required, let us state that a natural aptitude for the business is a prime essential.

There are many little details that may not be accomplished mechanically that only an enthusiast would be able to attend to. These start from the time the bulbs are planted, running along until the blooms are packed ready for shipment. Our warning is, if one cannot see more than dollars and cents in the business it is better to stay out.

In June issue of THE MODERN GLADIOLUS GROWER pp. 91-92, under Queries and Answers Department, part of F. B. R.'s queries are answered so this article is referred to, to avoid too much repetition.

Let us put ourselves in the position of the man who is going to grow an acre of Gladioli for the first time. Bulbs to plant an acre must be purchased. It would not be best to plant all first-size bulbs, not only from the standpoint of expense but for the reason that they might be older

than would be desirable; thus being profitable for but one season.

Approximately 100,000 corms will be required if the triple row method is adopted; bulbs four inches apart each way, the rows three bulbs wide then a three foot space for horse culture, then another row three bulbs wide and so on. Between the bulbs the ground should be stirred with a single pronged narrow hand tool. Would plant thus closely if only planting a quarter or half acre for the reason that the ground should be maintained in the most friable and best mechanical condition, besides being well fertilized. To do this means expense, hence the advisability of close planting. Might add that a piece of sod liberally manured and plowed in the fall would be ideal ground for Gladioli.

The first cost of starting the business is quite an item. First size bulbs to plant an acre closely as above described would mean an outlay of at least \$1,200 to \$1,500. Such an investment would seem too large, so it would be better business judgment to buy third or fourth size bulbs to start, and while these will not produce so large a spike as the first size until planted the second season, yet one is certain of getting young bulbs that will be profitable for three seasons. These smaller sizes increase more rapidly and sufficient cormlets could be retained and grown on to replenish the old stock from time to time. The third and fourth sizes of *America* and *Mrs. Francis King* are now available in quantities, and possibly one or two other varieties, and as these smaller sizes will not cost so much, four to five hundred dollars could perhaps be made to represent the cash outlay.

To sell the flowers from an acre, arrangements should be made with a wholesale commission florist located in your nearest large city. Supply and demand will govern the price. Sometimes if one will quote a low enough figure a flat price may be obtained throughout the season. Would make four to five plantings from early spring until July first,

the larger plantings early and late to get the highest market price with the largest quantity of bloom.

In a recent issue of a wholesale medium, it was predicted that millions of Gladiolus blooms would be on the market this season. Possibly prices will rule low. Probably the business will be overdone in poorly grown stuff, but if one has the knack of growing the best the market affords, it will not be a likely situation that the stock will go begging. No matter how many go into the strawberry business the fellow who grows the big ones, gets the price. The Gladiolus business has a future. It is possible to make five to six hundred dollars a year clear profit from an acre. It is a pretty safe crop, very little disease bothers, a heavy storm at blooming time is the most serious trouble that may occur. Our advice to the beginner would be to go easy. Plant an eighth of an acre. See whether you are adapted to the business or the business suits you. Start small, grow big.

JOE COLEMAN.

Rapid Multiplication of Gladioli— Pollenating and Hybridizing.

TO THE EDITOR:—

We are surely pleased with the first six numbers of THE MODERN GLADIOLUS GROWER and have read them over and over.

In the 1914 catalogue of the Luther Burbank Co. we find the following statement concerning the Gladiolus:

"If it is desired to multiply any specially fine Gladiolus, take it up in the fall and replant the little bulblets found around the old bulb, etc."

I should like to know if this could be done in the cold parts of America by planting the bulblets in frames or flats as soon as the matured bulbs are dug and letting them grow during the winter in the house, then setting them in the ground in early summer? The complete cycle of growth necessary for the mature plant is not clear to me. In a warm country is it possible to sow the Gladiolus seed in the ground and get matured plants from continuous growth of the bulbs?

If so, why could we not carry the choice varieties growing from bulblets in frames, and take them indoors when frost comes? In this way could not the length of time necessary for maturing be shortened?

Also could you give us some information on pollenating and hybridizing? We are greatly interested to know the principles and laws of association of the right kinds of plants. Can you recommend any book that will help us out? G. A.

Answer:—It will help "G. A." to be assured that full maturity of corms, bulbs, tubers, roots, etc., is not necessary. Let me give a little of my own experience:

Over 20 years ago I had a bed of seedling Gladioli full of young, thrifty plants some six inches high. They were all eaten

by grasshoppers and I supposed they were killed. Some weeks later I was spading the bed and found thousands of bulbs as large as apple seeds. I saved about 15,000 and kept them in the cellar until the following spring when they were planted. From that lot I raised about 15,000 that would average fully an inch in diameter.

Last year I had a few choice English potatoes grown the year before. They were put away so carefully that I never saw them till September. They were planted at once and even covered on a frosty night. I saved perhaps half a pint the size of small cherries. They were planted the first of June, and were hoed today. (June 24th)

I would expect that bulblets taken up in October, dried a few weeks and planted in pots would make nice little bulbs before spring. Then they could be dried off (rested) and planted at May first.

A few times I have seen Gladioli bloom the same year the seed was sown, but usually the season is too short. Bulbs over an inch in diameter may be grown from bulblets in one season without the use of glass. This occurs only under favorable conditions. M. CRAWFORD.

NOTE BY THE EDITOR:—For information on pollenating and hybridizing you are referred to the article by W. W. Wilmore, Jr., in the June issue. You are also referred to the book called "The Gladiolus" by Matthew Crawford and Dr. Walter Van Fleet, advertised in past issues of THE MODERN GLADIOLUS GROWER by Vaughan's Seed Store, Chicago and New York. We will have something further on this subject from time to time.

Developing Bulblets in Small Quantities.

TO THE EDITOR:—

I have quite a collection of bulblets in small quantities, in some cases only one or two from a rare and expensive bulb. What is the best way to make sure these germinate? What is a good method of keeping track of a collection like this in the garden so they will not be mixed? Can bulblets be started successfully in paper pots or boxes? E. E. P.

Answer:—The proper treatment of these bulblets should have been begun the day they were dug. Really the only difference between such stock in large or in small quantity is that as usually kept through the winter, those in small amounts are carefully wrapped in a small paper, perhaps a paper sack, and thus become so dry as to lessen their vitality,

or perhaps destroy it altogether. In this case also, the outer coating or hull becomes almost impervious to water, and the bulblet is therefore almost hermetically sealed against the only agencies that can evoke its latent power of growth—moisture, air, warmth. Those in such a condition should be carefully peeled to bring them into direct contact with the moist, warm earth, when if their vitality is not destroyed, they will soon respond. But such attention is not necessary if when dug they are imbedded in fine damp earth, and kept so during the winter.

As to keeping varieties separate, there need be no trouble. A little care is all that is necessary. I plant everything in rows, regardless of size, for greater ease in cultivation, and designate varieties by painted and numbered stakes, the numbers and corresponding names being recorded in my Field Note Book. There are several hundred such stakes in my plot each year. Several reasons will readily occur to any grower why I use numbers rather than the name on the stakes. A German friend and correspondent meets this difficulty by planting his choice bulblets in a frame, similar to an ordinary cold-frame, and separating the varieties by divisions of cardboard.

Now as to pot-culture. It would seem as though this method ought to be successful, and under proper conditions it may be, but my experience in it has been very unsatisfactory. I suppose by pot-culture is meant growing in pots in a greenhouse, as I can see no motive for such a method in field culture, but the disappointment attending the growing of either seed or bulblets in that way has led me to discontinue it altogether. Others may however, succeed, and if so, I should be glad to have them report.

WILBUR A. CHRISTY.

The \$1,000 Gladiolus Again.

TO THE EDITOR:—

Is a single bulb of a Gladiolus worth \$1,000? This question has been asked before, but I would like to elaborate on it a little by asking if a single bulb would be worth this amount if there were other bulbs of the same variety for sale? If you can venture an opinion on this, or any of your readers can offer suggestions, I would be glad to have them do so.

E. W. F.

NOTE BY EDITOR:—The question of values is always interesting, and those who care to express themselves on this subject will be given space for this purpose. It is certainly difficult to say whether a single bulb might be worth \$1,000 or not.

Early Gladiolus Bloom.

M. F. Wright's article on page 118 of this issue tells how he has been able to secure bloom in sixty-two days from time of planting. His methods of culture are not essentially different than practiced by many other growers, and it is probable that the chief reason for his success has been the fact that he allowed the bulbs to start considerable sprouts before planting. Growers have often noticed that bulbs with a sprout an inch or more in length would require but a few days to make their way to the surface, and if the soil and temperature is right they will continue their growth to early bloom. Someone has also suggested that the trenches be opened up a day or two in advance of planting to allow the sunshine to warm up the earth, and this would also seem to be an advantage to force the growth. It is, of course, understood that large, strong bulbs are necessary for early bloom.

Gladiolus Exhibits.

(Concluded from page 123.)

Decay at the base of the spike will affect the flowers disastrously. If the exhibit contains two or three thousand spikes it is best to do this work early in the morning before the crowds are admitted to the building. For vases we have found nothing better or cheaper than quart glass fruit jars. Never use colored vases for Gladioli. A dozen spikes is about the best number for each vase. Some varieties look best with more and some with less. We show each variety in a vase by itself, unless we wish to exhibit some special mixture.

In arranging the vases on the tables we like to group the varieties of each color together except in special arrangements of those that make a sharp contrast. Colors which do not harmonize should not be placed near each other. Blue looks well with yellow but not with red.

The best arrangement will depend on the space and positions to be occupied and the direction from which the light comes. If the tables are flat the tallest varieties should be in the center or the center can be built up with empty boxes.

Those who do not have sufficient blooms to make an exhibit at the larger fairs should not neglect their county and district fairs and other places where Gladioli can be shown. By taking advantage of these opportunities a good local business can be developed in the sale of flowers and bulbs.

Change of Date.

Owing to comparative lateness of the season and the difficulty of obtaining suitable space for exhibition, the date of the annual flower show of the Gladiolus Society of Ohio has been changed from August 7th and 8th, as stated in our June issue, to August 14th and 15th, just one week later. Those who were late in getting their stock into the ground and who have been disappointed in early bloom will be glad to hear of this change.

The place will be the Assembly Room of the Hollenden Hotel, Cleveland, Ohio.

We offer for Fall delivery: Panama, Niagara, Europa, Pink Perfection, Princeps, Princepine, Mrs. F. Pendleton, Peace, and El Dorado, etc., at very reasonable prices. Send list for quotations. We do Wholesale business only. W. E. Kirchhoff Co., Pembroke, N. Y.

All the Best Gladioli

Amaryllis, Arizona, Baron Hulot, El Capitan, Europa, Faust, Glory of Holland, Golden West, Gov. Hanley, Halley, Hohenstauffen, Ida Van, Lily Lehman, Mrs. Pendleton, Niagara, Panama, Princepine, Rosella, Magnificus, Nathalie Bourseul, etc.

**Exclusive owner of
Mongolian and A. W. Clifford**

To those who would like to see the blooms before ordering bulbs next season I can send by express prepaid a box of 25 varieties each marked with the name for \$1.00.

Clark M. Brown, Ashland, Mass.

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None better. Price list free. Also Airedale Terriers. Champion stock of great individual excellence.

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**John H. Umpleby, Lake View, N.Y.
R. F. D.**

We offer stocks of America. King, Brenchleyensis, Princeps, Klondyke, Baron Hulot and Mixtures. In Dahlias we have large stocks of Sylvia, Jack Rose, Red Husar, Prof. Mansfield, Hallock, etc. Let us know your wants in our line.

CUSHMAN GLADIOLUS CO., SYLVANIA, O.

American Gladiolus Society.

ORGANIZED MAY, 1910.

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THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.
Published Monthly by Madison Cooper, Calcium, New York.

Vol. I.

SEPTEMBER, 1914

No. 9



VASE OF GLADIOLUS NANUS.

Grown by W. W. Wilmore, Jr., Wheatridge, Colo.
(See article, page 107, July issue.)

The American Gladiolus Society.

ANNUAL MEETING.

The American Gladiolus Society held its annual meeting in the Copley Square Hotel, Boston, Mass., Wednesday, August 19th, at 2 p. m. with President M. Chamberlain presiding. It was voted to adopt THE MODERN GLADIOLUS GROWER as the official organ of the society, and pledges for its support were given. A committee of three was appointed to revise the rules and by-laws. Arthur Cowee reported on the work being done by the Experiment Station at Cornell University in connection with Gladiolus diseases.

The election of officers then took place and the following were unanimously appointed: President, Charles Franklin Fairbanks, Clinton, Mass.; Secretary, Henry Youell, Syracuse, N. Y.; Treasurer, A. E. Kunderd, Goshen, Ind. Executive committee: Maurice Fuld, T. A. Havemeyer and I. S. Hendrickson. Nomenclature committee: Prof. A. C. Beal, A. C. Hottes, both of Ithaca, and L. Merton Gage, of Natick, Mass. The selection of a vice-president was left to the executive committee, with instructions to select a San Francisco or California resident for the office. The compensation of the secretary was also left to this committee, to be finally decided upon.

As the next meeting will be held in San Francisco, the desirability of holding a Midsummer show in an Eastern city next year was also left to the executive committee for decision. A vote of thanks was extended to the outgoing officers.

Considerable time was devoted to a discussion of the distinction between the amateur and the professional grower in relation to exhibitions and the matter was referred to the committee appointed to revise rules and by-laws, but it was brought out in the discussion that a considerable majority of the members present favored liberality toward amateurs.

EXHIBITION IN MECHANICS HALL.

The display of Gladiolus blooms was not only large but of high quality, and it is doubtful if any former display approached it in magnificence. The amateur classes were especially good, being in some respects superior to the display shown by professionals. The following is a list of the prizes and the winners of same.

OPEN CLASS.

VAUGHAN'S SEED STORE.

No. 1—\$10.00—Best 25 spikes Gladiolus *Mrs. Francis King*. Won by S. E. Spencer, Woburn, Mass.

No. 2—Vaughan's Silver Medal—Best 25 spikes *Chicago White*. Won by C. W. Brown, Ashland, Mass.

No. 3—\$5.00—Best 25 blooms Vaughan's New *Primulinus Sunbeam*. No entry.

E. E. STEWART.

No. 4—\$5.00—Best 12 spikes of *Black Beauty*. Won by Madison Cooper, Calcium, N. Y.

No. 5—\$5.00—Best 12 spikes of *Golden Queen*. Won by H. E. Meader, Dover, N. H.

No. 6—\$5.00—Best 12 spikes of *Lucille*. No entry.

No. 7—\$5.00—Best 12 spikes of *Michigan*. Won by Madison Cooper, Calcium, N. Y.

W. E. FRYER.

No. 8—\$5.00—Best 6 spikes Gladiolus *Mrs. W. E. Fryer*. Disqualified flower spike.

T. A. HAVEMEYER.

No. 9—\$10.00—Best 6 spikes White. Won by C. F. Fairbanks, Clinton, Mass., with *Europa*.

No. 10—\$10.00—Best 6 spikes Pink or shades of Pink. Won by T. A. Havemeyer, N. Y. City, with *Panama*.

No. 11—\$10.00—Best 6 spikes Yellow. Won by T. A. Havemeyer, N. Y. City, with *Schwaben*.

No. 12—\$10.00—Best 6 spikes Blue or Lavender. Won by T. A. Havemeyer, N. Y. City, with *Badenia*.

No. 13—\$10.00—Best 6 spikes Red or shades of Red. Won by C. W. Brown, Ashland, Mass., with *Mrs. Clifford*.

No. 14—\$10.00—Best 6 spikes of any other color. In judging, the following points are to be taken into consideration: Color, as clear as possible; size, large and well expanded bloom; spike, strong with flowers evenly set. Won by T. A. Havemeyer, N. Y. City.

W. ATLEE BURPEE & CO.

No. 15—\$10.00—Best collection 10 varieties, six spikes each. Won by John Lewis Childs, Flowerfield, L. I., N. Y.

H. W. KOERNER.

No. 16—\$5.00—Best 12 spikes *American Wonder*. No entry.

No. 17—\$5.00—Best 12 spikes *Twilight Chief*. No entry.

JACOB THOMANN & SONS.

No. 19—\$5.00—Best 25 spikes any White variety. Won by Jacob Thomann & Sons, Rochester, N. Y., with *Rochester White*.

M. CHAMBERLAIN.

No. 20—\$10.00—Best 3 spikes White seedling. Won by Arthur Cowee, Berlin, N. Y.

No. 21—\$10.00—Best 3 spikes Yellow seedling. Won by H. E. Meader, Dover, N. H.

No. 22—\$10.00—Best 3 spikes Pink seedling. Won by E. N. Fischer, Jamaica Plain, Mass.

B. HAMMOND TRACY.

No. 23—Silver Cup for largest and best collection of Pink Gladioli, 3 spikes each. Won by John Lewis Childs, Flowerfield, L. I., N. Y.

M. CRAWFORD.

No. 26—50 bulbs *White Lady*, best variety never before exhibited. Won by Arthur Cowee, Berlin, N. Y.

A. H. AUSTIN CO.

No. 27—\$5.00—Best Corsage Bouquet. Won by Arthur Cowee, Berlin, N. Y.

AMATEUR OR GARDENER'S CLASS.

JOHN LEWIS CHILDS.

No. 28—\$10.00—Best 10 vases Childsi variety.
Won by T. A. Havemeyer, N. Y. City.

KNIGHT & STRUCK CO.

No. 32—For vase containing 3 spikes Gladiolus
Mrs. Frank Pendleton. First prize \$3.00,
Second prize \$2.00. No entries.

No. 33—For vase containing 3 spikes Gladiolus
Badenia. First prize \$3.00.
Second prize \$2.00. Won by T. A. Have-
meyer, New York City.

THE MODERN GLADIOLUS GROWER.

No. 34—Silver Cup valued at \$15. For largest
and best display of mixed and named varieties,
to contain at least 6 named varieties, correctly
labeled. 3 spikes each. Won by T. A. Have-
meyer, New York City.

JACOB THOMANN & SONS.

No. 35—\$5.00.—Best 3 spikes of any white vari-
ety. Won by Thos. Cogger, Melrose, Mass.
with *Europa*.

L. MERTON GAGE,

No. 36—\$5.00—Best vase of 10 varieties, 1 spike
each. Won by A. A. Rosin, Rochester, N. Y.

G. D. BLACK.

No. 37—60 bulbs *Golden King*. Best vase of
yellow varieties. Won by T. A. Havemeyer.
New York City with *G. Schwaben*.

H. E. MEADER.

No. 38—Cut glass vase, value \$7.00, for best vase,
6 spikes *America*. Won by Thomas Cogger,
Melrose, Mass.

AMERICAN GLADIOLUS SOCIETY.

No. 39—Best exhibit of at least 15 varieties, 3
spikes each, correctly labeled. Silver medal,
first prize. Won by Charles F. Fairbanks.
Bronze medal, second prize.

OPEN CLASS.

MRS. FRANCIS KING.

No 40—\$10.00—Best basket not less than 20
spikes arranged with two other flowers. Won
by Arthur Cowee, Berlin, N. Y.

CHARLES F. FAIRBANKS.

No. 41—For best display of Gladiolus blooms
any arrangement. First Prize, \$30.00. Won
by Arthur Cowee, Berlin, N. Y.

No. 42—Second prize, \$20.00. Won by C. F.
Fairbanks, Clinton, Mass.

JAMES WHEELER,
MAURICE FULD,
WILLIAM SPERLING.

Judges.

CONVENTION GARDEN AWARDS.

GLADIOLI.

James Vick's Sons, Rochester, N. Y.—
Bed of Gladiolus, *Rochester White*—not in
bloom.

Arthur Cowee, Berlin, N.Y.—Display of
Gladiolus *Peace*—Honorable mention.

John Lewis Childs, Floral Park, Flower-
field, N. Y.—Display of Gladiolus *Sun-
burst*, *Radiance Charmer*, *Attraction*, *Snow
King*, *Scribe*, *Sulphur King*, *Rosy Spray*,

Gleam, *Winsome*, of the Childsi type—Cer-
tificate of merit.

B. Hammond Tracy, Wenham, Mass.—
A display of Gladioli, but not in bloom.

E. E. Stewart, Brooklyn, Mich.—Exhibit
of Gladioli.

Bidwell & Fobes—Exhibit of Gladioli
Panama and *Niagara*, not in flower.

Arthur T. Boddington, New York—A
grand display of Hyacinthus candicans,
fine bed of Canna Panama, and a superb
bed of Gladiolus *America*—Awarded a
Silver Medal.

Hybridizing Gladioli for Amateurs.

By CHAS. F. BARBER.

The amateur grower of the Gladiolus
who does not each year produce some
hybrid seedlings, pollenized by his own
hand, has missed the keenest enjoyment
afforded by the game. The professional
may not have the time, patience nor im-
agination to expend in this way, but when
the amateur fusses around the garden he
may as well get the most out of it. Of
course it takes two years to get the first
results, but the fun commences the very
minute one starts to plan his combina-
tions and prepare the flowers for polleniz-
ing. And the trick is not difficult to
master, in fact it is almost too easy with
Gladioli.

For the past month in my gardens
there have been daily unfoldings of flow-
ers that perhaps have never before been
seen on earth. This year's hybrids are
mostly in combination with *Primulinus
Salmoneus*, and the results are beyond
expectation, especially the ones whose
seed parents were *Jane Dieulafoy* and *Mrs.
Francis King*. The former gives a large
range of salmon-pink shades with the char-
acteristic blotches while the latter fur-
nishes the most charming translucent
shades of pink and rose. Many of the
blossoms promise to be larger than either
parent when bloomed from full sized
corms.

When I say that the hybridization of
the Gladiolus is too easy, it must at the
same time be confessed that in my own
practice I have made it still simpler than
the conventional way, and I get the same
results. I side-step the usual methods,
for the whole bagging or screening pro-
cess is cut out, and I get more for my
money. When one has a number of new
sorts there may be only one spike of a
kind in bloom at the time required, and
it can be utilized both for its pollen and
as a seed parent. In other words we can

(Concluded on page 136.)

MRS. AUSTIN'S TALKS FOR
AMATEURS.

NO. 8.—GLADIOLUS SEED—DIGGING BULB-
LETS—ARMY WORMS—ASTERS
AS A SIDELINE.

—
CARE OF SEED.

Are you watching for those plump green seed pods from the varieties which you so carefully hand crossed? You will surely have them if you did your part in keeping the bulbs in good condition by intense cultivation, for the Gladiolus is a grateful flower and quickly shows its appreciation of special attention. Watch the seed spikes closely and when the pods turn brown and begin to crack open, gather and allow them to finish ripening under shelter. If spread on a paper in a dry place they will open wide and seeds cure well. They may then be taken out of the pod and placed in boxes or paper bags with the name of the varieties used in crossing, and year date, and stored in a cool place.

HARVESTING BULBLETS.

The early planted bulblets may be harvested now. Perhaps it seems a little early and they will be white and look anything but ripe, but they are much easier to get out of the ground when a little green as the tops will not break off. If there is a large quantity they may be loosened with a subsoil plow which will raise them up but not turn them over, and they may be lifted out by the tops. If well ripened the tops break off and the small bulbs must be picked out of the soil which is very tedious, so dig them green. Although they look so white and unripe, if spread thinly they will cure nicely and after their winter nap come forth fresh and strong the next season.

ARMY WORM.

How fortunate that the destructive army worm has not cultivated a taste for the Gladiolus. Evidently he is not included on the club or visiting list of the aster beetle and has not learned of the delicacy of Gladiolus petals. The extremely dry weather with burning sun rays causing blooms of greatest substance to droop flabbily, is the time of greatest revelry and feasting for this pest. He banquets his family and all his friends and may do much damage, for only a few in an hour's time can destroy enough blooms for a good sized shipment.

ASTERS.

I remember a springtime several years ago when discontentment siezed my soul and the desire came to either forget Gladioli, or grow several sidelines. However I could not forget the Gladiolus, and the several sidelines were not practical, but when the ever alluring catalogues arrived I chose one which especially appealed to me and studied it from cover to cover. So impressive was the manner of expression that I soon had a mental vision of a mile of asters. Some time later while attending one of the conventions the opportunity came to visit these large aster fields. I remember the pleasant hay wagon ride from the street cars and arrival at the farm of flowers, for there were many other flowers than asters grown there, a large section being given to our own beloved Gladioli, and then, from a slight rise of ground, the great panorama of color that lay before us.

That aster fever culminated in a nice little trial patch of a couple of thousand plants which were planted beside the Gladioli. The cut worms had a share, but most of the plants grew thriftily, were pinched and trained according to the best information we were able to obtain, and promised good commercial bloom. At this time we were called away for a few days and upon our return expected to find the blooms almost ready to cut. Imagine our disappointment upon finding hordes of the aster beetle feasting on the blooms. The first flowers of the earliest varieties were ruined. Although they were close to the Gladioli, they confined themselves entirely to the asters, and we gave them full possession. This kept them away from the Gladioli but they were ready for the fresh aster blooms and we tried paris green, making the solution weak and experimenting until we found that by using about $\frac{1}{4}$ oz. to five gallons of water would destroy them without injury to the plants or blooms. The beetles seem to congregate in different parts of the aster field instead of spreading over it, and are thus more easily destroyed by the use of paris green.

There is no better flower to grow as a side line with the Gladiolus than the aster. The cutting and shipping of the blooms comes at the time of the cutting of Gladioli, and they are gone at the time of digging the bulbs, thus not interfering with the harvest.

MRS. A. H. AUSTIN.

New subscribers may have their subscriptions dated back to January if desired, as we can still supply back issues.

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
PUBLISHED MONTHLY ON THE FIRST OF THE MONTH BY
MADISON COOPER, CALCIUM, N.Y.

Subscription Price:
50c. per year,
3 years for \$1.00.

OUR MOTTO:
Special favors to none, and a square deal to all.

Canadian and Foreign
Subscription Price
75c. per year

Adopted by The American Gladiolus Society as its official organ.

Growers are invited to contribute articles or notes over their own signatures, but the Editor reserves the right to reject anything which in his judgment is not conducive to the general welfare of the business.

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September, 1914

No. 9

Status of the Amateur at Flower Shows.

The status of the Amateur at Flower Shows is, in common with other competitive exhibitions, sometimes rather an indefinite one. So far as we have been able to learn the line has not been definitely enough drawn to make it possible to determine just what an Amateur is. We can, perhaps, by taking the definition for a Professional, and comparing it with the standing of an Amateur, arrive at the proper distinction. The definition given in Webster's dictionary for a Professional is as follows:

"One who follows or belongs to a profession; more commonly applied, in contradistinction to Amateur, to a person who makes his living by practicing an art or occupation in which nonprofessionals also engage; more specifically, a person who practises an art, occupation, or sport for a living, as distinguished from one who engages in them merely for pleasure."

By inference the definition of a Professional defines the Amateur. It is, we think, well enough understood that the Professional is one who sells his goods or services at a profit and who enters into a calling for the material gain that there may be in it. If the Professional engages in an occupation for a livelihood, the Amateur is one who does not engage in

an occupation for a livelihood, but rather for a love of the work; and again by inference, this may be construed as meaning that the Amateur is one who does not obtain any material portion of his livelihood from the occupation in which he engages.

Another, and we may say a narrow interpretation of the term Amateur, is that when the Amateur begins to sell his product or services for a valuable consideration he becomes a Professional. Suppose, for instance, that a person who grows a dozen Gladioli sells one of them to a neighbor. If the narrow interpretation should stand, immediately this person would become a professional grower when he receives pay for the single bulb sold. The absurdity of this is apparent. If the mere fact that a person sells a bulb or a few cut flowers makes him a Professional, it is pretty safe to say that there would be no Amateur exhibits of consequence. Most any Amateur is willing to sell when opportunity offers, and this enables him to dispose of his surplus, as well as to secure more funds with which to buy new and rare varieties. If the Amateur is not allowed to sell in a small way, the only person who under these conditions could or would indulge himself as an Amateur would be the man of wealth, and certainly

general rules should not be made for the man of wealth only.

After some rather extensive correspondence with different horticultural and floral organizations it has been found that the sentiment is largely in favor of a liberal interpretation of the term Amateur and few indeed are desirous of preventing the Amateur from selling his product should opportunity offer providing he does not make an effort to sell by means of printed matter, advertising or otherwise. It is, in fact, entirely a question of motive. An Amateur is supposed to engage in an occupation for a love of the work and not for gain and if his motives and methods are correct, there is no necessity of defining his position closely. It is in most cases quite safe to allow a person to place himself in the Amateur class if he thinks proper, as very few indeed are likely to abuse the privilege.

A fair interpretation of the term Amateur might be one who does not obtain an important portion of his livelihood or income from the sale of his product. Amateurs who sell their product do so not in the spirit of gain, but to enable them to indulge their tastes in the purchase of more and a better quality of their favorites. Should the Amateur advertise his goods for sale in any way and devote an important part or the larger part of his time to their production and sale, then he passes from the ranks of the Amateurs and becomes a Professional. On the above grounds, therefore, it would seem that the Amateur can be defined and it is urged that the narrow interpretation of the term should not be applied. The best interest and advancement of the work makes it unnecessary, and it would do a grave injustice to the Amateur class as a body.

This matter was quite fully discussed at the last meeting of The American Gladiolus Society and we believe we are correct in stating that three members out of every four present were in favor of liberality toward the Amateur essentially as outlined above. A more complete dis-

cussion of this subject is desired and we would be glad to hear from every one, either Amateur or Professional, who has anything to say on the subject.

MADISON COOPER.

We expect next month to print an article from the pen of W. W. Wilmore, Jr., already well known to our readers, on "Forcing Gladioli." This article goes into the subject very deeply, and gives full directions as to kind of stock to plant, how to plant it, how to cut the bloom, and all about it. Those who are interested in the Gladiolus as an all-the-year-round flower, may look forward to this article with a certainty that it will prove profitable and interesting reading. The Nanus varieties, some of which are illustrated on our front cover page, are included in the list of varieties suitable for forcing.

Hybridizing Gladioli for Amateurs.

(Concluded from page 133.)

give them the "double cross." In the mornings of the few days that I can be in the garden I make the rounds with pieces of soft thin flannel cut three-fourths inch square, which are inserted, folded once, with the aid of a small knife blade, between the stamens and pistil, forcing the latter against the upper petals, where there is not the least likelihood of contact by bees and far enough from the stamens so that conjunction with them is obviated. No covering is needed. When the pollen is ripe, some time after mid-day, the stamens are cut out from a flower and carried immediately to the blossom to be treated, perhaps returning the compliment to the one just robbed. Should any of the anthers be not quite receptive some pollen can be held till later in the day. When the operations are completed, possibly extending over two or three days, all the flowers below my field of operation, and the entire stalk above it are cut off, in order that the hybridized buds may have full benefit and that the corm may not suffer from too much work. Unless the parent flower is very small or hooded no petals need be removed, although the removal of the stamens will be easier if lower petals are broken down.

The hot and dry summer has proved the value of irrigating systems for growing Gladioli.

WAYSIDE RAMBLINGS.

FORCING GLADIOLI FROM SEED.

Perhaps the following experiment might be of some interest to your readers. It is not new but shows the capabilities of the Gladiolus and its elasticity in adjusting itself to unnatural conditions:

November 15, 1912, I sowed one ounce hand fertilized Gladiolus seed in flat boxes containing one inch drainage of coal ashes, sifted, seed resting on two inches of sandy loam with a small quantity of well rotted manure well incorporated and covered with one-quarter inch of fine sand. The boxes were covered with burlap and placed in carnation temperature where they remained.

April 1, 1913, the tops were turning yellow so the seedling bulbs were taken up, foliage removed, and placed in cool dry place after exposing to a few days' ordinary living-room heat.

May 13, at this time, the bulbs which in size varied from about the same as a grain of wheat up to one-half inch in diameter, appeared to be well cured and were planted out-doors in medium light soil dressed lightly with potato phosphate. They sprouted immediately and made a very vigorous growth.

Unfortunately, the freeze of Sept. 14th cut them down before blooming to any extent, although one good spike was obtained and several others were nearly ready to bloom. They were left in the ground until October 13th and then dug. Their size, compared with a two year old lot of seedlings, showed no advantage in that respect, being nearly identical but the rate of multiplication seemed quite materially increased.

This experiment of nearly continuous growth, crowding two seasons into one, as it were, seemingly has not affected the vitality of the bulbs as they were planted again this spring and are making beautiful growth. The foliage is dark green, and we confidently expect a good spike of bloom from each and all. This makes a fascinating experiment interesting in all stages besides the added advantage of obtaining some bloom the same year seed is sown, and growers are recommended to try it.

I find it a decided advantage, when planting a few choice bulbs or bulblets of rare kinds to strew enough fine sand to cover the bulbs before covering wholly with soil. I have planted rows this way together with those planted the ordinary way and find a decided increase in both

size and prolificacy, in favor of those sanded, so much so, that this year I am trying it out on a large scale.

H. E. MEADER.

GLADIOLI FROM SEED THE FIRST YEAR.

In the many articles that I have read in regard to growing seedling Gladioli, I do not see any mention of the seedlings blooming the first year. All agree that some will bloom the second year and nearly all the third. Don't know whether I am having greater success than other people, but wish to tell you what my seedlings did in 1913. Several of the large Gladiolus growers that I have talked to say that they have never flowered any seedlings the first year. In 1913 I grew 2,000 seedlings, and about 200 of them bloomed. Several of the spikes were 20 to 30 inches long when cut, 12 to 15 flowers to stalk. Several of the *Americas* came true to type and also several of the *Niagaras*. Two of the *Baron Hulot* seedlings were grand. The largest one was 32 inches of a spike 14 flowers upon stalk, well placed, eight wide open flowers, eight open at one time. A deep maroon color on edges of flower, shading to violet in center. Planted 1913 seedlings in hot bed March 14th of this year and they have flower stalks formed now, June 6th. Expect to bloom some of my seedlings this year, but will not have the success I had in 1913, as I have been unable to give them the attention they require. I notice that several of the seedsmen clean the hull of Gladiolus seed. Don't think that it is the right thing to do. I received quite a number of seed to try out this year, and under the microscope the clean seed showed up very poorly, as about one-third of the seed was bruised and spoiled by the rubbing they received.

RALPH CHARLTON, JR.

GLADIOLI AND CUT WORMS—HOW TO PREVENT THEM.

In the spring I spade my soil thoroughly about April 15th and again two weeks later. Then cover the surface with well rotted black stable manure for about three inches deep; then go over the manure with a bucket of thoroughly air-slacked lime of two or three weeks' standing, covering the manure almost out of sight by the use of a small scoop I keep for this purpose. In about ten days I turn the manure and lime thoroughly under, and keep turning it over and under once every ten days till the latter part of May when I plant my corms. I planted a

few Gladioli last spring and had such good success with them with the above method that I purchased a considerable variety of them in March this year, treated my soil as stated above and planted my corms about the 25th of May. Today, July 12th, my patch of Gladioli is one mass of tall, healthy, green foliage, and one *Klondyke* in bloom.

Few, if any insects, will stay where there is the presence of lime in the soil, or at least this has been my experience in the past three years among my rose bushes of which I have about 100 bushes of the choice varieties, and with the lime treatment have met with the best of results both as to bloom and extermination of soil insects. My advice to my fellow amateurs is: "Don't tamper with the host of commercial fertilizers which are so extensively published in the farm journals from Maine to California!" Not knowing the chemicals they are composed of, we poor amateurs are liable to get badly stung. Good soil, fairly drained, good well rotted cow or stable manure, and air-slacked lime, and I venture to assert nothing can go ahead of it.

R. J. PATTERSON.

REMEDIES FOR CUT WORMS.

I notice that inquiry is made in the July issue about the destructive cut worm.

These are the larvæ of certain moths, and are very destructive to most plants. They feed by night or on cloudy mornings, and by going out early in the morning before they have had time to burrow deeply in the ground and hunting for them with a sharp stick a good number can be destroyed. There are two places to look for them. The first is just below the surface of the ground close to where you find the freshly cut off stem, the other is under the foliage of perennials with thick, heavy leaves, where a few moments spent in hunting them will save many choice plants.

I find that a good quantity of wood ashes or sifted coal ashes, if the wood ashes are not available, is an excellent thing to mix with the soil when preparing it for the bulbs. I have put "bug death" around the plants and stirred into the soil where I found them. Soaking the ground with kerosene emulsion where the ground seems full of them, is also highly recommended to kill the cut worm I have read.

I hope these suggestions will prove of service to those who are being troubled.

MRS. H. A. HILDRETH.

CYCLE OF PLANT GROWTH.

Referring to your article on "Cycle of Plant Growth", I think your point well taken. It is natural for all plants to have or rather pass through a dormant period as a time of rest, which is as necessary to the plant as sleep is to the animal or human. It is my opinion that the Creator divided the years into seasons for no other reason than to sustain plant life by giving it a dormant season or time of rest. However short a season may be or how little they may vary one from another, plant life takes advantage of the change.

Last fall I planted some choice Gladiolus seed in a flat in the Greenhouse. These I intended to grow and ripen off in April to plant out again in May. They were so slow in starting that they were too small to take up at the time I had set for them. Thinking I could keep them growing until late in the summer in order to be able to hold them over winter, I thought I would let them grow, but about May 1st they began to turn yellow and ripen off of their own accord. I then saw that I had to hasten their ripening or lose them entirely as the season would be too short to get them started again. I took them up, gave them thirty-four days of rest and planted them again. They are now about four inches high and will probably make large-sized corms considering the circumstances. They still have about sixty days to grow if bad frosts stay off till late.

This proves to me that one cannot force a plant to go without rest over and above its natural growing season. In cases of matured plants such as hyacinths, narcissi and tulips which are forced during their natural time of rest which would of course be during the winter months, because of their bloom the bulbs become absolutely worthless whereas if grown in the open soil at their proper time they will flower again the following season. All these things point to the fact that rest is as essential as growth.

W. W. WILMORE, JR.

Deep planting of Gladioli as advocated necessarily means deep ploughing. Bulbs should not be planted six inches deep if ploughing is the same depth. There is really no limit to the depth of ploughing if the soil is deep. If the soil is sandy, it should be built up with humus by ploughing under deeply, stable manure or green manure crops. The greater the depth of humus the better retention of soil moisture, and the ground may be plowed 10 inches, or even 12 inches, deep.

QUERIES AND ANSWERS DEPARTMENT



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

White Lady, Peace and Europa Compared.

TO THE EDITOR:—

Will you please tell me how the variety *White Lady* compares with *Peace* and *Europa*? A description of the last two mentioned will be interesting. F. W. S.

Answer:—Referring to your inquiry in regard to comparison of Gladioli *White Lady* (*Rochester*) *Europa* and *Peace*, find below description of the different varieties as we see them here:

White Lady—*Gandavensis*—An upright strong grower, 3 ft., flower medium size, rather stiff and heavy, of great substance, giving flower a waxy appearance. Color white, strongly tinted with greenish yellow. I find no reference to anthers, but as I remember it they were white or faint lavender. It increases very slowly, mostly by doubling, giving very few and small bulblets. Bulbs are of poor keeping quality, very subject to ailments and ills peculiar to the white varieties.

Europa—*Gandavensis*—Medium grower, not as heavy in stem and plant as *White Lady*, 3 ft.; flower larger than *White Lady*; much more gracefully arranged on the spike; color purest white at all times, with an extremely small red mark in base of throat, anthers faint lavender. Increases fairly well considering color, both from doubling and from very large bulblets. Bulbs keep well.

Peace—*Groff*—Very strong grower; stem and leaf very thick and heavy; flower large and spike very long, height 4 to 4½ feet. Account height and weight of stem and spike it is liable to lean and should be supported to get No. 1 bloom. Color, compared with the above two sorts, this variety is variegated, white, strongly marked with lavender or lavender-pink. In dry time we have had it nearly white, but in wet season we have had specimens as dark as the lighter colored of the well known *May*, and I have never heard the latter referred to as "white." *Peace* increases well both from a goodly number of large bulblets and from the doubling

of the largest bulbs that I ever saw, which carry through the winter very clean and hard.

White Lady has been on the market for many years and has never become a factor on the commercial market and unless it can be increased faster than ever before it never will. It is never quoted lower than \$10.00 per 100, and if flowers are cut it is a hard matter to even keep stock up. As a cut flower proposition it shows nothing but a loss. *Europa* shows up much better with us than *White Lady*; stands hot weather better, ships better, keeps better, and increases much faster. It is a better spike, though the flowers lack the stiff thickness of *White Lady*. Every quality considered, I think it a much better sort than the latter, and in view of the fact that it surely can be bought for \$20.00 per thousand by fall of 1915, it is certain to put *White Lady* out of the running. As to a comparison of these two with *Peace*, there is no comparison, as it is not of their class in growth or color. *Peace* is in every way a splendid sort, well worth the market price, but it is not "white."

RALPH E. HUNTINGTON.

Tristis and Atroviolaceous— Early Blooming Varieties.

TO THE EDITOR:—

Kindly advise me, if possible, where I can procure a few bulbs each of Gladiolus *Tristis* and *Atroviolaceous*.

Also, if it is not too much trouble, I would be glad to be informed of the names of some of the earliest blooming of the modern large flowering Gladioli.

I have read the numbers of THE MODERN GLADIOLUS GROWER already received with much interest, and I look with much pleasure for the succeeding numbers. F. J. H.

Answer:—I shall have some bulbs this Fall of both *Tristis* and *Atroviolaceous* and can supply your correspondent F. J. H.

There are several varieties of the Gladiolus that are claimed to be early bloomers. I have one that I named *Premiere* because of its habit of leading the field, and others that are claimed to be early bloom-

ers are *Albino*, *Beaumont*, *Dr. A. Dohrn*, *Early Bird*, *Easter*, *Eldorado*, *Etoile Polaire*, *Florida*, *Halley*, *Lady Howard de Walden*, *Lacordaire*, *Lucretia*, *Le Verrier*, *Madame Desbordes-Vulmore*, *Maréchal Fabert*, *Morning Star*, *Mary Le Moine*, *Negerfürst*, *Pegase*, *Precox*, *Precocious*, *Pink Beauty*, *Precurseur*, *President Chandon*, *Selma von Strasser* and *Tsatine*. There are others that I do not recall at the moment.

Myrtle, the famous soft pink, is an early bloomer, but is not among the first to open.

Pink Beauty is said to bloom during June in Holland, but we cannot expect it to appear so early in this climate.

M. CHAMBERLAIN.

Time from Planting to Blooming.

TO THE EDITOR:—

Would it not be practicable for your publication to give some information as to the interval between the planting of Gladiolus bulbs and their flowering?

If an amateur Gladiolus lover, for the combination of color or for cross-fertilization were to plant, on the same day, *White and Gold* with say *Baron Hulot*, which comes to bloom a month later, he would be disappointed.

Mr. M. F. Wright sends out such information as to a few of the familiar names. Are there others who have kept similar record? Perhaps Prof. Hottes could help us some.

Only an approximation is practicable or desirable, owing to variations in bulbs of the same variety and to culture, soil, season and climate. Weeks would be sufficiently close as the unit.

To mention some of the varieties, most of them from Mr. Wright's record, we should expect blooms from *Jessie* in about 10 weeks; from *White and Gold* in 11 weeks; from *Glory*, *Lucille*, *Ks. Orange* and *Large Buff*, 12 weeks; from *America*, *Myrtle*, *Mrs. Frank Pendleton, Jr.*, *El Capitan*, *Ida Van*, *Blood Spot* and *Panama*, 13 weeks; *Princeps*, *Red Canna* and *Queen Alexandra*, 14 weeks; *White Lady*, 15 weeks; *Baron Hulot*, 16 weeks; and 1900 perhaps as late as 17 weeks. However uncertain these periods may be with varying conditions, they would be some guide in grouping the varieties.

I should like to know approximately the corresponding periods of *Peace*, *Prince of India*, *Faust*, *Canary Bird*, *Brenchleyensis*, *Le Moines' Butterflies*, *Golden King*, *Mephistopheles*, and in fact many others too numerous for detail.

A. P. M.

*Answer:—*My list gives approximately the time from planting to blooming season of the varieties that I raise. The condition of bulbs, size, firmness, age of bulbs and weather conditions of the growing season as to perfect rainfall and temperature, have much to do with hurrying up the growth of the plants. This would cause considerable of a variation as compared with bulbs poorly kept over or

grown during unfavorable weather conditions the season before. This applies especially to bulbs which are overgrown and are soft and spongy. Should the weather after planting be cold and wet so that perfect cultivation could not be given, this would have a tendency to retard growth and set the plant back almost to the extent of a dwarfed condition at times. This would cause several days at least variation in blooming time.

My records may vary a few days this season from last, as we have had a much more favorable growing season so far during 1914.

I do not grow the varieties, *Peace*, *Prince of India*, *Faust*, *Canary Bird*, *Brenchleyensis*, etc. so have no record of them. Those who grow these varieties could, doubtless, give the information "A. P. M." asks for.

I am always glad to help any brother grower, and will share any knowledge I may have with him about growing Gladioli, but hesitate to try and give any further information than above.

M. F. WRIGHT.

Note by the Editor:—We will appreciate any further information on this subject.

Commercial Fertilizer for the Gladiolus.

TO THE EDITOR:—

Would you recommend a good commercial fertilizer for Gladioli, and about how much per acre? It is my intention to do considerable planting of this flower another season, and I want information along this line as far as possible.

W. P. E.

*Answer:—*Some of the best growers use commercial fertilizer largely, and they recommend from 500 to 1,500 pounds per acre depending on condition of soil and analysis of fertilizer. Growers who use commercial fertilizer, if they use barnyard manures, use it sparingly and only when well rotted, but there is a difference of opinion on this subject as some growers claim that green manure does not do any damage with them. Anyway, manure should be thoroughly pulverized and mixed with the soil. This is true of any fertilizer which may be applied.

The coleus which Paul L. Ward has sent out on orders received from his advertising have proved most satisfactory. The rich and striking colors which are represented in the modern coleus are not known to most people, and a collection of Mr. Ward's plants will be a revelation to many people.

The Gladiolus Society of Ohio.

THE annual meeting and show of The Gladiolus Society of Ohio was held at the Hollenden Hotel, Cleveland, O., on Aug. 14 and 15, 1914. Considering the fact that the season was backward and droughy the display of bloom was extraordinarily good, the nearby Gladiolus growers especially putting on exhibits which were remarkable for their perfect condition and superior quality. Many exhibits were sent in from a distance and some of these enterprising growers were fortunate enough to secure some of the prizes as will be noted from the schedule which follows.

The large Assembly Room of the elegant Hollenden Hotel was filled to overflowing and the quality of the exhibits was good. Six large tables side by side down the center of the hall were devoted to the specimens of decorative work by the florists of the city.

The entries numbered double those of last year and the premium list was an excellent one, there being many donors of special prizes like silver cups and medals.

The hearty thanks of the society were tendered to the Florists' Club and to the publisher of THE MODERN GLADIOLUS GROWER, as well as the management of the Hollenden Hotel for the courtesy extended, which was most deeply appreciated.

LIST OF AWARDS.

THE AMERICAN GLADIOLUS SOCIETY.

Class 1—Best Display by Amateur, 10 varieties, 6 each. Silver Medal, first prize. Won by John Betscher, Canal Dover, O. Bronze Medal, second prize. Won by Madison Cooper, Calcium, N. Y.

THE MODERN GLADIOLUS GROWER.

Class 2—Silver Cup valued at \$15.00. Best display. Open Class, 10 varieties, 6 each. Won by Bidwell & Fobes, Kinsman, O.

JOE COLEMAN.

Class 3.—Silver Cup. Best collection not less than 10 named varieties, 6 each. Won by R. E. Huntington, Painesville, O.

THE GLADIOLUS SOCIETY OF OHIO.

Class 4—Certificate of Merit. New seedling or other variety, not before shown here, any color, grown by exhibitor, 6 spikes or more. Won by Wilbur A. Christy, Warren, O.

C. BETSCHER.

Class 5—\$5.00—Best collection Primulinus Hybrids. Won by Clark W. Brown, Ashland, Mass.

THE H. F. MICHELL CO.

Class 6—Bronze Medal. Best vase cut Gladioli, any varieties. Won by Bidwell & Fobes, Kinsman, O.

THE PERKINS-KING CO.

Class 7—100 Corms *Niagara*. Best vase *Niagara*. Won by Bidwell & Fobes, Kinsman, O.

MUNSELL & HARVEY.

Class 8—\$5.00—Best Vase solid White. Won by J. Thomann & Sons, Rochester, N. Y.

C. BETSCHER.

Class 9—12 Extra Named Peonies, value \$12.00. Best vase *Europa*. (No entries.)

Class 10—12 Extra Named Peonies, value \$7.50. Best vase *America*. Won by Bidwell & Fobes, Kinsman, O.

Class 11—12 Extra Named Peonies, value \$5.00. Best vase *Mrs. Francis King*. Won by C. B. Gates, Mentor, O.

Class 12—12 Homocallis, value \$5.00. Best vase *Panama*. Won by Bidwell & Fobes, Kinsman, O.

Class 13—6 Homocallis, value \$2.50. Best vase *Mrs. Frank Pendleton*. Won by Bidwell & Fobes, Kinsman, O.

Class 14—25 Corms *Europa*. Best vase *Glory*. Won by Bidwell & Fobes, Kinsman, O.

Class 15—25 Corms named Nanceianus. Best vase Florists White. Won by Bidwell & Fobes, Kinsman, O.

Class 16—25 Corms named LeMoineii. Best vase Light Pink. Won by Munsell & Harvey, Ashtabula, O.

Class 17—25 Corms named Pfitzerii. Best vase Rose Pink. Won by Perkins-King Co., W. Mentor, O.

Class 18—25 Corms named Childsi. Best vase Yellow. Won by Bidwell & Fobes, Kinsman, O.

W. ATLEE BURPEE & CO.

Class 19—\$5.00—Best vase Red, any variety, 10 spikes. Won by Munsell & Harvey, Ashtabula, O.

E. E. STEWART.

Class 20—\$5.00—Best vase *Michigan*, 10 spikes. Won by Madison Cooper, Calcium N. Y.

Class 21—\$5.00—Best vase *Black Beauty*. Won by Madison Cooper, Calcium, N. Y.

H. J. ALFORD.

Class 22—\$5.00—Best new Seedling, any color, one or more spikes. Won by J. Thomann & Sons, Rochester, N. Y.

N. L. CRAWFORD.

Class 23—\$5.00—Best White Seedling, one or more spikes. No award.

WILBUR A. CHRISTY.

Class 24—50 Corms, high-class, named or mixed Gladioli. Best vase Blue. Won by R. E. Huntington, Painesville, O.

A. H. AUSTIN CO.

Class 25—Silver Cup. Best decorated basket of Gladioli for funeral use. Won by The Jones-Russell Co., Cleveland, O.

AUXILIARY PRIZES BY THE CLEVELAND CITY FLORISTS' CLUB.

Best display standard varieties, the Telling Prize, Silver Cup. Won by R. E. Huntington, Painesville, O.

Best display new varieties—award as yet undecided.

Largest display in the show—The Mathews Mfg. Co. Prize. Lawn Trellis. Won by Munsell & Harvey, Ashtabula, Ohio.

It might not be out of place to call our readers' attention to the fact that bound volumes of THE MODERN GLADIOLUS GROWER with indexes will sell for \$1.00. Therefore, it will pay to save your copies as we will supply the Index free. There are a lot of valuable suggestions and points of information in the first volume which is quickly available by means of the index. If you are short any back issues we can supply them for 5c. each. Volume I will doubtless be in great demand.

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THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.
Published Monthly by Madison Cooper, Calcium, New York.

Vol. I.

OCTOBER, 1914

No. 10



GLADIOLUS—GOLDEN KING.
(For description see page 150.)

“Forcing” Gladioli.

By W. W. WILMORE, JR.

FORCING Gladioli is perhaps the latest enterprise in floriculture in America.

Many years have the Gladioli been in our gardens, but a short time only have they been forced as a winter flower. Its comparative ease of culture has made it possible for many inexperienced growers to bloom it under glass, some successfully while others have made failures because of lack of knowledge. To help others to success with this plant, I here offer the knowledge I have accumulated from actual experience with that which I have been able to gather from other sources.

Four things of importance must be considered—Soil, location, kind of stock to plant and how to plant it.

First.—Soil should be light and full of humus, if inclined to be at all heavy, enough clean, sharp sand should be used to keep it porous under the most adverse conditions. Avoid fresh manures and never allow fertilizers to come in contact with the corm or roots.

Second.—A light, sunny location should be provided in a house where temperature never exceeds 60° F. during the day and not below 45° to 48° F. during the night. Gladioli bloom quicker, flower larger and retain their green foliage if kept at an even temperature of about 50° to 55°. They should be grown in solid benches on the greenhouse floor to insure a cool slow growth.

Third. Corms should be selected which have never been used for forcing or cut flowers before. They should if possible be of virgin stock, (never before bloomed) cone shaped and at least $\frac{3}{4}$ as thick as they are broad. Avoid flat, broad corms even though they look strong and healthy, as this kind send out from two to four sprouts all terminating in different flowering spikes which are generally weak in stem and deficient in bloom. Secure your stock from growers in cool countries, such stock is matured much more slowly than warm grown stock and is richer in starch which is the vitality and strength of the plant. Avoid scabby, dark looking corms or any that do not have a bright, clean appearance.

Fourth.—Prepare the bed first with good drainage, using cinders, coarse gravel or any other like substance; cover with eight inches of soil as before mentioned, level down and press corms in far enough not to be disturbed while covering with the top dressing. Place corms 4 to 6

inches apart according to size, right side up. Cover them with two to three inches of prepared soil using one-fourth well rotted sheep manure or cow manure. Smooth the surface, pack moderately and water thoroughly. No further attention is necessary until sprouts appear when they should be cultivated, stirring the soil with any convenient tool to kill sprouting weeds and admit air.

Water only when necessary and then thoroughly. Frequent sprinkling must be avoided. Keep the surface soil loose at all times as air and water are as essential to mature a perfect spike of bloom as fertilizers. As soon as plants begin to show their stocks of bloom it is advisable to feed with liquid manure, using small quantities at first. This can easily be overdone, turning the foliage yellow and rotting the corms. Caution is advisable. Water plentifully during blooming season but do not allow your plants to sicken and turn yellow by this kindness. Always bear in mind that a plant can be harmed more through kindness and attention than neglect.

CUTTING THE BLOOM.

When cutting the bloom if your corms are of any value, do not remove all the foliage from the plant. The leaves are for the purpose of breathing, and without them the plant must suffocate and die. When cutting, insert a thin knife blade into the stock, bend it from left to right holding it immediately below the first flower, twist slightly pulling it gently upward. Nine times out of ten the stock will slip completely out of the leaves, giving the required length of stem and still leaving the leaves on the plant to continue its maturity. These corms may be grown again in the field but should never again be forced.

VARIETIES TO FORCE.

Nearly any variety that I have yet tried will bloom under glass, in fact any free blooming sort may be counted as a good forcer. There is one object however to be considered and that is as to whether or not certain varieties are profitable to use as forcing sorts. Any variety whose period of bloom extends over certain lengths of time would not be as profitable as one whose blooms come at one time and are gone in a short space of time giving up the valuable room they occupy to some other plant.

The following list of Gladioli I would consider best for all purposes taking into consideration popularity, color, quickness of blooming, ease of culture and sturdy growth, in their order of merit.

America, well known Pink

Mrs. Francis King, Flame Pink.

La Prophetesse, Silvery White, Crimson throat.

Taconic, deep Pink, Crimson throat.

Augusta, White, flecked Lavender.

May, White, flecked Rose.

Klondyke, Primrose Yellow, Crimson blotch.

Twentieth Century, deep Crimson Scarlet.

Jessie, Velvety Red.

Independence, Rose, Carmine blotch.

Baron J. Hulot, Indigo Blue.

Brenchleyensis, Crimson Scarlet.

The following varieties are very good but on account of their prices it will be some time before they are used for forcing in quantity.

Panama, bright vivid Pink.

Niagara, deep Cream.

Lily Lehman, White Blush tint.

Halley, Salmon Pink.

Chicago White, White, almost pure.

Mrs. Frank Pendleton, Jr., soft Pink, Crimson blotches.

Pink Beauty, Pink with dark blotch.

Peace, the strongest and largest White.

Golden King, Sulphur Yellow, dark blotch.

Early Pink, bright Salmon Pink.

Many others are undoubtedly as good as those above mentioned, but the writer has tested this list with care and found it to be satisfactory in every respect for forcing purposes.

COLD FRAMES.

Another way to produce early bloom is by planting in cold frames. This work is done in the fall before cold weather sets in. The frames should be of two inch plank 12 inches wide for the high side, 10 inches wide at the lower side. Build frames according to the size sash which is to cover it. As a rule 4x6 sash are used which means that the frame should be six feet wide and any numeral of four feet in length. Cross bars are provided to set in at intervals of same distance to allow the sash bars a convenient rest and cut off air spaces at their junctions. The bed is prepared same as the greenhouse bench except that the top of the bed should be level with the bottom of the frame. Drainage is not necessary in the bottom. Plant in same fashion as in the greenhouse covering to a depth of two to three inches. If soil is moist, watering is not practicable as the corms may rot during the cold, dormant season.

When cold weather sets in, cover with sash and mats or any other convenient covering to protect from frost. Open as soon as possible in spring, covering at night. Cultivate and care for same as if it were the greenhouse bench. Stock thus planted will bloom early in June.

PROFITABLE SPECIES—NANUS VARIETIES.

Aside from the large flowering types are several beautiful species and varieties such as *Gladiolus Colvilli* and *Gladiolus Nanus*. The beauty of the *Nanus* varieties are equaled by none. Their exquisite markings and color combinations put them in a class all their own. Their ease of culture make them the most satisfactory of all small flowering or early flowering Gladioli. It seems to me that this race of Gladioli has been shamefully neglected in America. Their corms are very cheap in comparison to the large flowering sorts. They are wonderful producers, producing by division rather than cormels, as an average they produce from three to six blooming sized corms from each corm planted. Planted in the greenhouse in November, they bloom during March and April. Late December plantings or early January brings a good crop for May. November plantings in cold frames with moderate care can be forced for Decoration Day. They need only the culture of the large flowering types.

Mr. Maurice Fuld of New York has written an article, entitled "*Gladiolus Nanus*" which is in my opinion a valuable paper on this subject. (See July issue THE MODERN GLADIOLUS GROWER.)

The best varieties of this sort for forcing are as follows:

Peach Blossom, bright Pink.

Queen of Holland, dwarf, White, Carmine markings.

Queen Wilhelmina, tall, Flesh color, Carmine markings.

Sapho, pleasing Lavender.

Modesty, Flushed White, Pink markings.

Delicate, pure White, large Carmine markings.

Crimson Queen, Crimson Scarlet, Pink markings.

Blushing Bride, Blush, Carmine markings.

Ackermani, Salmon Scarlet, darker markings.

Apollon, clear Salmon, faint markings.

Prof. Bloom, shade darker than *Peach Blossom*.

Kelway's Beauty, Salmon Rose, Carmine markings.

COLVILLI VARIETIES.

Colvilli varieties are limited. This race carry few if any markings. They vary

but little from the Nanus varieties, except that the petals are more pointed and are void of blotches or heavy markings.

The best varieties are:

The Bride, pure White.

Rosea, lively Pink.

Rubea, Red.

Alba, somewhat like *The Bride*.

ATROVIOLOCIOS VARIETIES.

Another interesting species is Atrovio-lacious. This species resembles the hare-bells rather than the Gladioli. Its flowers are very small, a color between lavender and purple, borne on slender stems a little thicker than a good sized match. For florists' work where this color is wanted or dainty flowers are sought this species would be of value. It bears from six to eight flowers per spike, standing about fourteen inches high. Another good feature is that it blooms at least thirty days earlier than any other small flowering Gladiolus. I have heard that there are three colors, dark blue, purple and white, although purple is the only variety I have grown. There are many other beautiful species but they are valueless for forcing as compared with the foregoing species and varieties.

In conclusion, I might remark that a short time only will bring a wonderful improvement in forcing Gladioli, same as the sweet pea has been developed. We will have the large flowering types in varieties that will bloom in as short a space of time as do the Nanus or Colvilli types. Let us work to this end that we may enjoy the Gladiolus the year round as we do the rose.

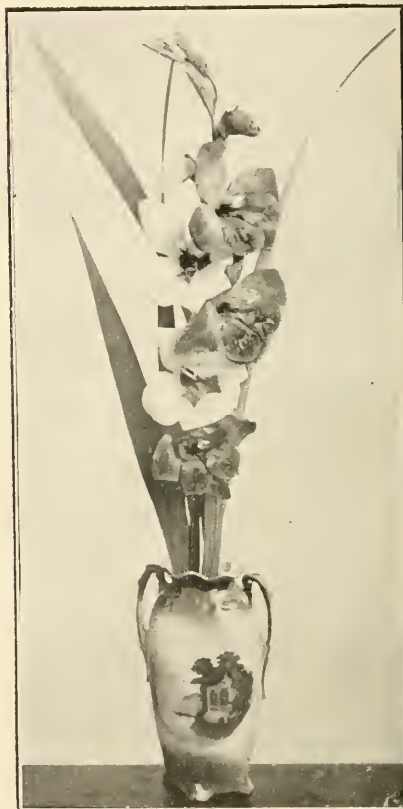
We are in receipt of a basket of Gladioli from M. Crawford, of Cuyahoga Falls, Ohio. These comprise the varieties *White Lady*, *Winifred* and a spike of *Theodosia Grant*. As usual the express companies are slow and they arrived pretty well bloomed out, but both *White Lady* and *Winifred* show up well as a contrast, the former pure white with a greenish tint in the throat and the latter scarlet with a white throat. *Theodosia Grant* is new to us. It is a white with a pink border and tips on the petals.

Through failure to report same to us we neglected to mention that Mr. Eugene N. Fischer was awarded an Award of Merit by The American Gladiolus Society for his exhibition of promising seedling Gladioli. We are pleased to make this correction as Mr. Fischer's exhibit was especially good.

A Rare Gladiolus Sport.

TO THE EDITOR:—

I am sending you a photograph of a spike of Gladiolus *Black Beauty* which has red blossoms on one side of the spike and white blossoms on the other side. I consider this a rare sport. Nearly every season we find a few blooms of this variety that have one or more white petals. Sometimes there is one white petal and



half of another and sometimes two petals and half of another are white. Again there will be only one-half of a petal that is white. When the white petals occur on the lower part of the flower they are marked with a bright red blotch, and where the half white petal occurs on the lower part, half of the red blotch is clearly defined. Repeated efforts have been made to perpetuate this trait by saving the bulbs and planting them separately, but thus far, without results as they all produced red blossoms the next year.

E. E. STEWART.

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
PUBLISHED MONTHLY ON THE FIRST OF THE MONTH BY
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Vol. I.

October, 1914

No. 10

Soil Conservation.

*"Unto everyone which hath shall be given;
and from him that hath not, even that he
hath shall be taken away from him."*

Like many other scriptural expressions the above does not mean exactly what it says. It certainly would not be possible to take something from nothing, although it would be possible to give to a person who already had. As applied to soil and soil culture, however, the quotation continually comes to the mind of a person who has worked much with growing things. A lean or worn out soil will not grow much of a crop and those who have had experience know very well that a run down soil is a very difficult thing to build up and put into good condition for fair crops. The leaner and poorer the soil is, the greater the tendency to become still more impoverished, and necessarily, the poorer the crops secured. In other words, *"from him that hath not, even that he hath shall be taken away from him."*

On the other hand, with a soil which is in good tilth and well filled with humus and the necessary chemical elements, it is indeed easy to maintain the state of fertility unless unusually exhausting crops are grown. This does not mean, however, that due diligence and care should not be exercised in maintaining the state of fertility as once on the down hill grade the arresting of the depreciation is difficult.

A liberal supply of humus or decaying vegetable matter is the most important factor in the keeping up of soil in condition for securing maximum crop yields. If the soil is well filled with humus the necessary chemical elements may be supplied in the form of commercial fertilizer in proportion to the rapidity with which these elements are removed by the particular crop grown. The maintaining of humus is a very easy matter in soil which is already well supplied. In fact the tendency with some crops is to increase the humus content of the soil rather than diminish it. Soil rich in humus and otherwise in a fertile condition everyone knows will give big crops. In such cases *"Unto everyone which hath shall be given."*

Poor soil tends to produce smaller crops and rich and fertile soil, if well handled, tends to produce larger crops.

MADISON COOPER.

Those who planted Gladioli at intervals or in relays this season secured during September some of the finest blooms. The frost held off well and the late blooms are always extremely acceptable. Those who grow cut flowers for market find the prices much better after the bulk of the crop is out of the way. The editor will have bloom until November 1st if Jack Frost would only keep his hands off.

Digging Bulblets.

Many of the large growers begin digging their bulblet grown stock, which is always a tedious job, in September. Bulblets are usually planted very early, and, therefore, have a longer period of growth, and if dug in September, the tops are still firm and can be used in lifting the bulbs. Amateur growers, who have not already commenced to dig their bulblets, may start soon. Although it is advantageous to get as large a growth as possible, yet with bulblets the advantage in digging while the tops are still green is so great that the small additional growth secured by later digging will hardly compensate.

Garden Club of Alma, Mich., Gladiolus Show.

TO THE EDITOR:—

Early in August the following notice appeared in the papers of Alma:

"The members of the Garden Club of Alma, and all those interested in growing Gladioli, are cordially invited to attend the second annual Gladiolus show of the Garden Club of Alma at the home of Mrs. Francis King on Aug. 17, at 3:00 p. m.

"All entries for each class are free for all growers, who must have their exhibitions at Mrs. King's before 10:00 o'clock Monday morning.

"Class 1. Best general collection.

"Class 2. Best arrangement of two or more varieties in a vase or basket with foliage.

"Class 3. Best single spike of any named variety."

Monday, the seventeenth, a brilliant day, found the Committee on Arrangements busily at work on the brick-paved porches of the house where the Show was to take place; sixteen foot boards covered by dark green paper-cambric formed excellent tables for the one and two-quart Mason jars in which all single spikes of Gladioli were placed and also for exhibitors' own baskets or vases holding collections. Sixteen members of the Club showed Gladioli, several exhibiting in more than one class; and a supplementary exhibition contained bowls and jars of annual and perennial flowers, some of rare interest and beauty. A table which attracted greatly held two great, round, shallow, French baskets filled, each one of them, with the most beautiful collections of fine vegetables, though neither these nor the general collections of flowers shown were entered for competition.

Prizes were awarded as follows, first prizes in each class only being mentioned here. Class 1, Mrs. H. C. Moore; class 2, Mrs. Ezra Smith; class 3 Miss Angell. The prizes, for the most part contributed by individuals were fine garden tools

and collections of Darwin tulip bulbs, named varieties. Among the varieties of Gladioli exhibited were *Chicago White*, *Wild Rose*, *Niagara*, *America* and *Mrs. Francis King*. The latter by its telling and brilliant color seemed to dominate the entire exhibit and gave rise to a highly intelligent criticism on the part of a visitor from a distance, who said that he noticed a lack of variety in our exhibits. This we were glad to hear for it will stir us up to fresh effort for next year's show and set us to trying all classes and varieties of this marvelous flower.

The attendance at the show was very large and included both men and women to the writer's great delight, for she has always contended that the interest of men in the present gardening movement in this country is a prime necessity to its real success.

A group of five women motored forty miles to see our little display, and have since written that they are soon hoping to copy our Garden Club and our Show of Gladioli as well.

No mention of any doings of the Garden Club of Alma would be complete without setting down at the same time the name of Mrs. William Anderson, honorary president of the Club. For forty years Mrs. Anderson, whose farm is seven miles from Alma, has dug, sown, planted and cultivated her own beautiful flower and shrub garden before her house. No rare or novel flower but has a place there for trial, the bloom is marvelous to see from end to end of the season; the garden has become a place of pilgrimage and the wonder and pride of the whole countryside. Would that your readers could see in June the long lane bordered on either side by the finest varieties of Oriental poppies, and the tallest and most floriferous possible to imagine; and that they might visit this lane again in August and notice how the flaming lines have changed into white and rich pink through the blooming of perennials phloxes! And this is only the lane, not the garden!

MRS. FRANCIS KING.

Clark W. Brown, Ashland, Mass. states that he won first prize in Class No. 13 at the Boston Show of The American Gladiolus Society, for best six spikes of red, with the variety *Amaryllis* and not *Mrs. Clifford* as reported in our September issue.

W. W. Wilmore, Jr., Wheatridge, Colo., sends us a post card circular listing his bulbs for fall planting. These include his list of Gladiolus Nanus.

MRS. AUSTIN'S TALKS FOR
AMATEURS.

No. 9—A DAY IN OCTOBER.

We arise by "early candlelight," as grandfather used to say, and after a hearty farmer breakfast take our first peep of the outside world and find ourselves in Cloudland, no, it is Wonderland, a world of hidden mysteries and surprises. The great gray veil spread over all is being gradually pierced by the rays of Old Sol rising in mighty splendor, and we see, dimly at first, the tree-tops in the valley appearing like oases in a desert. An early train has hurried through leaving a great cottony roll of smoke. Our world is slowly changing to glistening silver, soon to become golden, as the sun climbs the sky.

In the yard all is bustling animation. The family cow, grain-fed, milked, and staked in nearby late clover is watching the busy scene in mild-eyed wonder. The farm team would like to dance their way to the field for the morning is cool and they are feeling good. Bob, the colt, hitched to a boat-load of trays is taking first lessons in the harvesting of Gladioli these days, and Charlie, our man who cares for the "live stock," says he "never *did* see a horse try so hard to learn to do work the *right* way." All is ready and the men, teams and several boys are off to the still dewy field, while Chad, the collie, parades a little in advance with the air of a general superintendent, stopping occasionally for a dash after wayward kittens that are bringing up the rear. The Mrs. is met coming from the field, having gone early to gather the last precious seed stalk and a small bunch of the occasional late blooms, realizing that Gladiolus bloom will be no more until next season.

The team is hitched to the subsoil plow, and with a careful driver and a man to guide the plow, several rows are loosened, but not turned over, and are ready to be gathered. Boys follow after and grasping the tops with one hand quickly break the bulbs free, tossing them into baskets, which, when full, are emptied into wagons. These are large size bulbs and can be gathered quickly, and it keeps the teamsters busy hauling from the field to the storage building where they are forked into trays.

These trays are made of light wood, $\frac{3}{4}$ inch stuff, 48 inches long, 18 inches wide, 4 inches deep, bottoms made of builders' lath with a narrow strip across

the bottom for support. A three-cornered piece of wood 1 inch thick is tacked to the bottom of each corner, thus making an air space when piled one above the other.

In using the potato fork when unloading, the loose bulblets and soil are shaken off the bulbs into the wagon box, and are then shoveled into bins or large boxes where they are left until we are ready to sift or wash the soil out.

In another part of the field the newer varieties, of which we may have, perhaps, only a few hundred or a thousand or two in various sizes of the different varieties, are being gathered and spread in labeled trays in the sunshine where they will dry rapidly and become fairly well field cured so they can be placed where they are to stay until late winter or early spring when we will have more time to prepare them for planting.

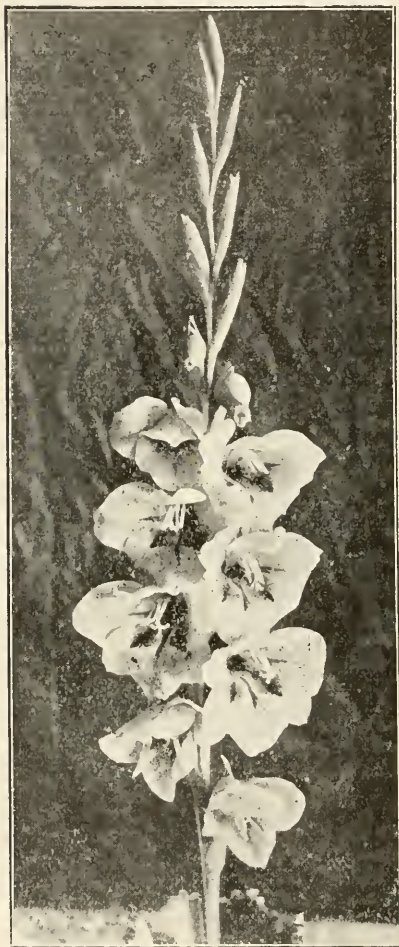
Noontide. The hour for rest and refreshment perhaps a glimpse of the daily news, but we turn from the horrors of war to the peaceful beauty of our now golden day which has reached its culmination. The distant horizon has assumed its summer resemblance of a great lake and we see imaginary whitecaps in the blue waters.

The work of the afternoon is largely a repetition of the forenoon. The rows are fast disappearing, and many wagon loads of the large brown bulbs have been taken from the field, for the late rains have brought a good growth, and it is a bumper crop. Many of the bulbs have been shoveled like potatoes onto the floor of a large airy basement, where, with an occasional forking over, they will cure as well as if in trays. When the last load of the day comes in all in the store house are well looked over to be sure that they are labeled properly. The trays of bulbs that were curing in the sunshine are piled up compactly and covered to prevent getting damp over night. Baskets are bunched and the field is deserted.

As the summer waned the beautiful colors of the blooming Gladioli seemed to melt into and become a part of the rich glowing shades of autumn; the glorious ripening process of the aging year, and surely never was the forest so softly brilliant as in this hour of sunset. As the light disappears, the stars come out thickly, wonderful mysterious worlds. Ah, how great it is to be even a small part of the great universe.

The air is cool, there may be a frost to-night, and shivering a little, we enter into the warmth of the living room. A friend is softly touching the keys, and from the

depths of a large chair we listen dreamily to the melody of "Reverie" (Mendelssohn) and watch the pictures in the fire until grandfather's clock, with its old time clearness, chimes out nine o'clock (sun-time), goodnight.



Gladiolus—*Golden King*.

This single spike was grown from a bulblet.

As reported by Secretary Christy of the Gladiolus Society of Ohio, the action of the judges in awarding the Cleveland City Florists' Club's cup to Jacob Thomann & Sons, of Rochester, N.Y., for best display of new varieties at the Cleveland Show, is sustained by the withdrawal by the club of its protest in reference thereto.

Digging Gladiolus Bulbs.

The simplest and best way to dig Gladiolus bulbs is to use a spading fork set down with the foot alongside the row to depth well below the roots. A prying motion loosens the soil and the bulbs with their attached bulblets can be lifted by means of the foliage. The tops or foliage should be cut off at once within an inch or so of the bulb. It has been advised to leave the tops on while curing, but this is bad practice as the tops absorb the juices and sap of the bulb and weaken it to some extent. Bulbs may be dug any time before the ground freezes and the longer they are left, if the tops remain green, the larger and stronger the bulbs and the larger number of bulblets secured. Note what is said elsewhere in this issue about digging bulblet grown stock. These may be dug earlier if they were planted early as they should be.

The Gladiolus "Golden King."

This new yellow seedling was offered for sale for the first time in 1913. It has been well distributed and tested and has already won a certificate of merit in Europe and prizes and distinction in America.

Golden King resembles its parent, *Golden Queen*, but is much larger in flower and habit of growth. The color is a bright glistening yellow with a striking crimson blotch in the throat. Many good judges say that the dark center makes the flower more beautiful than if it were all yellow. *Golden King* produces a large spike from mature bulbs and from 21 to 23 flowers are common. From six to eight of these are often open at one time. The flowers are large, round and broadly expanded and are well arranged on a strong spike.

Golden King is inclined to develop crooked stems during extremely warm weather, but many growers think that this is an advantage for display and decoration. If straight stems are desired, the crooked one may be broken off when one of the lateral branches will usually develop a straight stem with large flowers.

There are very few varieties indeed, that are as vigorous in growth as *Golden King* and small bulbs will throw a large flower spike and bulblets flower freely the first year if planted early.

Golden King was originated and introduced by G. D. Black & Co., Independence, Iowa, and under Mr. Black's enterprising handling has already been very widely disseminated.

WAYSIDE RAMBLINGS.

THE \$1,000 GLADIOLUS BULB.

Can a Gladiolus bulb be worth a thousand dollars? Most assuredly. Who will deny that the first bulb of *America* was worth a thousand dollars? Or of *Niagara*, *Panama*, *Mrs. Frank Pendleton*, or *Kunderd's Glory*? Perhaps nobody made that much out of them, but that would have been a small price to pay to save any one of them from extinction, and there also are others, and may be others to come, though it would be hard to say what any new one should be like to be worth such a sum, as the Gladiolus world seems to be pretty fully represented.

A new bulb, to be worth any such price, must give a flower that is distinctive, that is first class in every respect, and that fills a place not already occupied, must be a vigorous grower and a good reproducer. The more prolific a bulb is, the more it is worth, though the sooner its market price will go down after the stock begins to be plentiful.

As to whether a bulb might be worth that price if others of the same kind were on the market, that would depend on whether the variety were worth it in the first place, and how many others were in existence. If the stock in existence numbered thousands of bulbs, such a price would not be justifiable; if only three or four or a dozen, it is possible, most certainly. B. C. AUTEN.

CYCLE OF PLANT GROWTH.

TO THE EDITOR:—

In reading your article entitled "Cycle of Plant Growth," also the remarks by Mr. Crawford, I am reminded that I have been conducting unwittingly an experiment along the lines mentioned.

Having saved some seed from my Gladioli last season, I, like all enthusiasts, was anxious to see what it would do, and accordingly planted fifty seeds in a box in the house the latter part of February. This was done merely as a vitality test but the little plants grew so nicely that I did not wish to throw them out, and the first of May they were transplanted in the garden in hopes that they might continue to grow until fall.

In the middle of July the foliage began to die down and on July 20th I dug up two of them, the tops of which were entirely dead. I found two solid, smooth, bright looking little bulbs about the size of a large sweet pea seed. I shall dig up

the rest of them at once as the foliage is nearly all dead. Does not this indicate (I will not say prove) that it would hardly be possible to prolong the growing period much beyond what is natural?

Since reading the article above referred to I have decided to let these bulbs rest about a month and then replant them, hoping to carry them through another period of growth and rest in time to plant them out next spring. Having a lot of seedlings which were started last May it seems practical to carry them over until next May and plant them about the same time as those first mentioned thereby enabling me to make a comparison between bulbs passing through two and three periods of growth in the same period of time. Would this not be practical as a test, and could not the same experiment be applied to bulblets and to mature bulbs?

GEO. A. WHITNEY.

TIME OF BLOOMING.

As I have kept a record of the time when planted to the time of blooming of the Gladioli that I grow I can answer in part the questions asked by "A. P. M." in the September issue of THE MODERN GLADIOLUS GROWER as follows:

	Planted	Bloomed	Time
<i>Golden King</i>	May 21	Aug. 16	87 days
<i>Mephistopheles</i>	May 18	Aug. 28	102 days
<i>Peace</i>	May 18	Sept. 1	106 days

Some bulbs of *Peace* bought from a New York firm about the same size as our own growing recorded above and planted at the same time and in the same row, bloomed August 10th or in 84 days, which is 22 days earlier than our own bulbs. These, however, only grew about half as tall as plants from our own bulbs. As *Peace* is a late bloomer we attribute this behavior to their not being acclimated and shall expect them to bloom at about the same time as our own stock next season.

MARY GOODRICH TOWNE.

PRINCEPS AND PRINCEPINE.

In a recent issue of the MODERN GLADIOLUS GROWER a correspondent asks about the difference between *Princeps* and *Princepine*.

Princeps has broad, bluish green foliage, generally considerably drooping, and is of comparatively dwarf habit. The foliage of *Princepine* is a light yellowish green and the growth considerably taller.

The flowers of *Princepine* are not as large as those of *Princeps* but of a brighter scarlet. *Princepine* has a whiter throat marking and a dark blotch—a decided *Lemoine* or butterfly effect. *Princepine*

has several flowers open at a time under favorable conditions, while one rarely sees more than two perfect flowers of *Princeps* open at a time. I think that *Princeps* is especially averse to a stiff soil but is generally healthy and sometimes increases rapidly by cormels. I had a lot from Holland last year which in a very dry season and a rather badly drained spot were affected with bulb rot. I find them troubled in the same way this season. The only thing to do with such a lot is to throw them away and get a new stock. My other *Princeps* were all right. They are planted beside *Princepine*, giving me an opportunity to see how the two compare under the same conditions.

GEO. S. WOODRUFF.

TIME OF BLOOMING.

Regarding the article of "A. P. M.," page 140 Sept. issue, our records are as follows:

Variety	Planted	Bloomed	Time
<i>Prince of India</i>	Apr. 29	Aug. 1	94 days
<i>Faust</i>	" 29	" 1	94 days
<i>Canary Bird</i>	" 28	" 5	99 days
<i>Brenchleyensis</i>	" 24	" 2	100 days
<i>Golden King</i>	" 24	July 27	94 days
<i>Peace</i>	" 24	Aug. 1	99 days

No record of LeMoines but they are generally about five days earlier than Gandavensis.

R. E. HUNTINGTON.

American Gladiolus Society.

Secretary Youell, of The American Gladiolus Society, writes that it is proposed to issue in January, 1915, a preliminary schedule of prizes to be offered at the next Gladiolus show. This will be a decided advantage to donors of prizes as well as to growers who wish to compete, as it will enable them to make suitable preparations. Secretary Youell is to be congratulated on his enterprise in this direction and we believe that it will be productive of good results to all concerned.

Circumstances seem to indicate that there is likely to be some cutting in the prices of Gladiolus bulbs during the coming season. The influence of the great European War has been to contract the outlet of the Holland growers and this will mean a greater shipment to this country, and prices on many varieties will doubtless be much lower than last year.

If we may be pardoned the suggestion, it would be well that the wholesalers should pass along the low prices to the small growers, and thus encourage as large a planting as possible in 1915.

Auburn, Me., Gladiolus Show.

The first annual exhibition of The Gardeners' Union of Lewiston and Auburn was held at Auburn Hall, Auburn, Maine on August 27th and 28th, 1914.

A large variety of flowers, fruit and vegetables of most excellent quality was placed on exhibition by the members and their friends making the affair a great success, not only as an exhibition but financially as well. Gladioli occupied the largest space of any single species of flower with asters next in prominence.

The largest display of Gladioli was that of Messrs. Horne and Noyes, professional growers of Lewiston, Maine. Their exhibit was made up almost entirely of named varieties among which *Peace*, *Niagara*, *Baron J. Hulot*, *Cracker Jack*, *Jane Dicalafay*, *Blue Jay*, *Canary Bird* and *Intensity* were prominent.

Next came the exhibit of Rev. George Kinney with some splendid specimens of various named and mixed varieties. Mr. Kinney has been an enthusiastic amateur grower for a number of years and his product does him great credit.

The three exhibitors taking the Horne and Noyes prizes had much smaller displays but they were not lacking in quality and beauty of bloom.

A long list of prizes in the form of ribbons, cups, books and cash were awarded, too long for publication here, but the winner of the Gladiolus prizes may be of interest and were as follows:

John Lewis Childs' prizes:

A - Won by Horne & Noyes.

B - Won by Rev. George Kinney.

C - Won by Mrs. Laura Hildreth.

Horne and Noyes' prizes:

A - Won by Geo. A. Whitney.

B - Won by Mrs. Bainbridge.

C - Won by Mrs. Hildreth.

Gardeners' Union prizes:

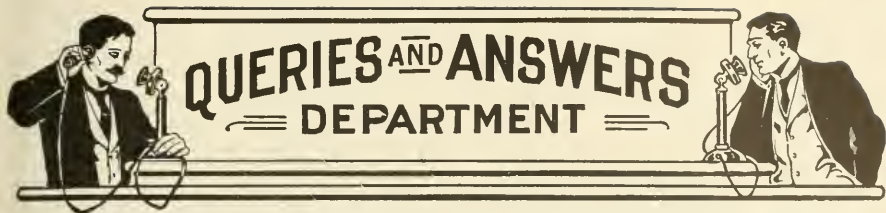
Class 29 - Won by E. E. Coombs.

Class 30 - Won by M. C. Stone and Mrs. Bainbridge.

There was a great deal of interest among all visitors in the Gladioli and it is quite evident that the popularity of this flower is growing locally as much as in other parts of the country. The possibilities of this flower are being realized by those who are now growing them and others are learning of their value as an addition to the home grounds as well as for cut flowers.

GEO. A. WHITNEY.

There is no hurry to dig bulbs. In the latitude of New York any time in October is generally safe.



QUERIES AND ANSWERS DEPARTMENT

[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Leaves of Gladioli Turning Brown.

TO THE EDITOR:—

The tips on our Gladiolus leaves are all turning brown. Some of them were started in the greenhouse while some were planted direct outside. The soil for all of them has been well prepared with old rotten horse manure and no other fertilizer of any kind has been used. Our ground is very light. We have had little rain and the Gladioli have been watered on several occasions and always cultivated thoroughly. Up to a few days ago they all looked fine, and now suddenly this drying of the leaves has started. We thank you in advance for any information you may give us.

B. & B.

Answer:—I have had the tips of Gladiolus leaves turn brown when they happened to be in a place where the drainage was bad. I suppose they were dying because they were being drowned.

A number of years ago for experiments with a small lot of small bulbs, I put on a very heavy dose of high grade manure, with the result that they blighted badly and the bulbs were most of them spotted. I concluded that perhaps it was too much nitrogen. Perhaps that is what is the matter with "B. & B's." Gladioli.

A number of years ago I bought a blue mixture that I treated just the same as other stock. They blighted badly. Some of the leaves died to the ground. I concluded in that case that they had some inherent ailment or were of weak constitution so I discarded them.—J. H. UMPLEBY.

Seedlings Classed as Worthless.

TO THE EDITOR:—

Will you please tell me just what is meant by the statement that most Gladiolus seedlings will be "worthless" or "valueless?" Does this mean that they will be so inferior to the varieties now on the market that they will not be salable, or does it mean literally worthless to the amateur who grew them? If the latter, how is it so often we see unnamed seedlings advertised? A. H. B.

Answer:—It is common for seedlings of most species of vegetation to produce in crossing with other varieties, hybrids which are for the most part inferior to both parents. This may be understood as a general rule but not as an inflexible

law. This is the reason why it is stated that most Gladiolus seedlings will be worthless or of little value. In many cases crosses result in a large percentage of really good varieties, but only a few of them will be equal or superior to the parents if the parents were originally of the better class. It is common practice that when the inferior varieties from seedlings bloom, to pull them up and destroy them so as to avoid wasting any further time with them. Any variety which is plainly a retrograde is certainly worthless from either a commercial or amateur standpoint.

The unnamed seedlings which we see mentioned from time to time and perhaps advertised as such are, doubtless, for the most part crosses resulting from the work of large hybridizers who do not consider these unnamed seedlings worthy of name, but yet who consider them of sufficient value to sell them as a mixture.

If some of our experienced hybridizers and commercial growers can throw any further light on this subject, we will be glad to hear from them.

MADISON COOPER.

Poor Germination of Bulblets.

TO THE EDITOR:—

I am trying to find out why some varieties of the Gladiolus will give an abundance of plants from offsets while other varieties that make plenty of offsets or cormlets fail to germinate to any considerable extent. *Blue Jay, Dawn, Sulphur King* and others fail to make offsets that will grow, while those from *Niagara and America*, for instance, grow like weeds. This matter of the failure of cormlets to grow is a great bother, and if you can throw any light on the subject, I will appreciate it.

F. M. W.

Answer:—Not knowing the conditions under which "F. M. W." kept his bulblets I cannot give any definite information. If small lots are kept on shelves in paper bags, they usually become too dry, while a large bag full would not become dried out except on the outside and would grow a much larger per cent. I think soaking for a day or so before planting might help.

C. W. BROWN.

"Blending" of Colors— Planting Mixtures.

TO THE EDITOR:—

As I am somewhat inexperienced in Gladiolus growing I would appreciate some information regarding the cause of the alleged blending of colors if mixtures are planted together. Is it necessary to plant each variety by itself in order to strictly retain trueness of stock, and will different varieties planted together change their color in time or blend and finally revert to some type color? Or does the idea which is prevalent to some extent, at least among the uninformed, come from a natural tendency of the strongest varieties to multiply the most rapidly and surely and thus finally predominate—a sort of "survival of the fittest?"

R. G. H.

Answer:—The so-called "blending" of colors which you refer to, is an entirely erroneous deduction. There is really nothing in the idea. Where a mixture of Gladioli are grown for several years in succession, the rapid multipliers increase to such an extent that they predominate the mixture and the weaker are crowded out. Some of the finest varieties do not reproduce to any considerable extent and may run out completely in a few years under unfavorable cultural conditions. Others are so robust in their constitution that they increase rapidly under any circumstances.

It is not at all necessary to plant stock of each variety by itself to maintain it true to name, but it is desirable to plant named varieties separately for several reasons. Where different varieties are planted together they will remain true to type, generally speaking, as close association does not mean that they will mix or blend or cross in any way so far as the bulbs or bulblets are concerned.

Rust in Gladioli.

TO THE EDITOR:—

Can you tell me if the rust which comes on the tips of the foliage of the Gladiolus is injurious, and is there any remedy?

The tips of some of the blades turn brown which I suppose is rust. It spoils the appearance, and I do not like to see it, and will be glad to have someone tell me about it.

H. A. H.

Answer:—Regarding the discoloration of the tips of the foliage of Gladioli, I have never considered that it is particularly injurious and I do not know of any remedy for it. While it disfigures the plant I do not believe it can be avoided, being due almost, if not entirely to climatic conditions. Some seasons we have little or none of it and other seasons large areas will be affected, especially in the small stock.

ARTHUR COWEE.

Trouble from Rot or Disease.

TO THE EDITOR:—

Some experience of mine leads me to think that the trouble with "H. N. E.'s" bulbs described on page 110 July issue is caused by a vitiated atmosphere. A lady of my acquaintance was remarkably successful with the Gladiolus on her farm in Jefferson County, Pa., miles away from any pottery, smelter or manufacturing center. Finally the farm was sold and the family moved to the north part of Beaver Falls, Pa., which is a manufacturing and railroad center. While living there she had no success with the Gladiolus, although I sent new, healthy stock. Some would die, others had yellowish foliage, and the best of them made small bulbs hardly worth planting. Another friend in the same neighborhood has to get new bulbs every spring in order to have moderate success. Two miles west of his place on the hills, where the air is pure, one of my friends raised some of the finest bulbs I ever saw.

In the east end of Akron, O., our county seat, there are extensive potteries, and great quantities of salt are used to glaze the ware. The air is poisoned with the chlorine that comes from the salt, and the Gladiolus fails there as a rule. So I suspect that within a mile or two southwest of "H. N. E.'s" place there is something that vitiates the air. I have heard that in Anaconda, Mont., the smelters kill nearly all vegetation.

M. CRAWFORD.

A Florida grower reports that some Gladioli which were planted for an experiment after they had finished blooming in the north, and without giving them any period of rest, gave excellent satisfaction and resulted in perfect flowers with large spikes and completely covered with buds and with the flowers well opened and vigorous in every way. This has a bearing on various items on "Cycle of Plant Growth" which have appeared in these columns during the past two months. If other growers have had experience along this line we would certainly be glad to hear from them.

Thomas Cogger, Melrose, Mass., who won first prize for the best three spikes of white in the Amateur Class at the Boston Show of The American Gladiolus Society writes us that he won with *Rochester White* and not with *Europa* as reported in our September issue. We are pleased to make this correction in justice to *Rochester White*.

Gladiolus Notes.

By PAUL L. WARD in *Rural New Yorker*.

It is now time to dig Gladiolus bulbs. Choose a dry, sunny and windy day if possible, and do the digging in the morning. Cut off the tops about one inch from the bulb, not over two hours after digging, as the stems keep on drawing food and moisture from the bulbs, which they should not do. A fine way to keep the ripened bulbs over winter is in shallow boxes, say two inches deep. Fill the boxes level full of bulbs and place box on cellar floor. Under each corner of the box put a small block so that there will not be immediate contact with the cellar bottom. Look at the bulbs at least once a month and see that they are not rotting or molding. If you do find these conditions, dry them out at once in a light airy room and remove all infected bulbs. Air the cellar thoroughly before putting the bulbs back, and try to keep the cellar in a drier condition.

Most people grow Gladioli in mixtures of all colors. Do not rely on division of the bulbs for keeping up your stock. This will work all right for a few years, when your flowers will commence to be smaller, the wind will break the stems easily and there will be little or no indication of vigor. Then it is time to throw the whole lot in the compost heap and start over. For the private grower the old bulbs should be thrown out every few years, and new ones grown from bulblets should replace them. These bulblets you will find at digging time, clinging in and around the old rotted root, sometimes as many as a hundred on one bulb. Rub these off and save in paper sacks through the winter. In Spring soak the bulblets 24 hours in tepid water and sow one inch deep in rows. They may be planted very thick, but be sure to keep the weeds out, or they will be very difficult to dig in the Fall. By keeping a small quantity of these little bulblets coming on each year—they do not bloom till the second year—your stock will not run out, as is the case when division of the bulb is relied on for the increase or keeping up an even quantity.

You who are already following the plan of growing the bulblets have doubtless noticed your mixture gradually getting stronger in the bright red shades, and most people attribute this to a running out of the strain and a reversion to the original types (our present day Gladioli being a product of the hybridizer's art). This is not the case, however, but is due to the fact that the red varieties have a

tendency to produce bulblets much faster than the whites, pinks and yellows, and consequently the reds must increase their proportion on the mixture. This can only be avoided by buying new bulbs from time to time of other than the bright reds, or by marking at flowering time the red ones and then at digging time throwing out most of the red-producing bulblets. The most satisfactory way of all is to find a few varieties that you like, grow each kind separately and know just what to expect from year to year.

For those who love this flower try next year a few *America*, *Mrs. Francis King*, *Peace*, *Golden King*, *Augusta*, *Panama*, *Taconic*, *Niagara*, *Cracker Jack*, *Evaline*, *Klondyke*, *Blue Jay* and *Brenchleyensis*. This covers practically the entire range of color from bright scarlet to almost pure white, and in price from ten cents to fifty cents a bulb. There is an absolutely pure white, even to the anthers, called *Rochester White*, but the price of one dollar per bulb is prohibitive to most of us. The flowers of the above are large except *Augusta* and *Brenchleyensis*, but as these have from seven to ten open at once they are just as attractive.

Amateur growers who are not already growing that fine old variety *Brenchleyensis* originated many years ago in England by the father of our friend, Henry Youell, of Syracuse, N. Y., should by all means add some bulbs of this variety to their collection for another year. While many of the older growers are inclined to depreciate *Brenchleyensis*, yet it has many sterling qualities, and while it is certainly not ideal in some ways, yet it has a useful place and should be grown as a standard variety. Small growers especially should stick to *Brenchleyensis*.

If you are growing mixtures, (and most amateurs do at the start anyway,) when the poor sorts bloom pull them up bodily and put them on the compost heap. Keep the mixture good by adding to it from other sources and by growing seedlings, and it will always be a source of joy and interest.

We are in receipt of a circular from John Lewis Childs, Flowerfield, L. I., with list of his new Gladioli for introduction in 1915. These comprise fifteen different varieties. This list also contains the four "Kings," *Fire King*, *Ruby King*, *Salmon King* and *Sulphur King*.

The first killing frost in Northern New York was on September 25th.

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THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.
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No. 11



GLADIOLUS—PANAMA.

(For description see pages 162 and 164.)

What is an Amateur?

BY JAMES M. ADAMS.

This question seems to have raised a great deal of discussion in the horticultural field, and it would seem as though it should be determined, if possible, once for all.

Take the case of the writer, for instance: I work at my trade, that of a printer, continually. After my work in the composing room is over I go home, don my overalls, etc., and work among my flowers, not alone for the intense love I have for them, but because it gives me the kind of exercise I need, and which I do not get in the office. As a member of the Connecticut Horticultural Society I have won prizes on my flowers. A few years ago I had some 500 dahlia plants on an adjoining lot, but as the lot was sold I had no place to plant them the next season, so I sold some that spring and the following spring until now I have less than a dozen clumps of bulbs to house. I had given many away, but I wanted some Gladioli and so sold my dahlias to get some money to buy my Gladioli. And now they tell me I am a professional because I *sold* a few bulbs.

Now if such is a fact, which I contend it is not, what am I, and where am I? As a professional, surely with a small city garden spot, 70 by 30, I cannot hope to enter into competition with growers of acres of dahlias or Gladioli, and, therefore, am shut out entirely. That being the case, what incentive has anyone to try to cultivate flowers and show them? And where will the professional growers be if they have no amateurs to sell their stock to, thereby increasing the love and demand for their goods?

Now one might buy bulbs and sell them through advertising or otherwise as a side issue, and yet never raise a flower himself. Would that constitute him a professional? I cannot see how.

It would seem to me that under the whole question lies a nigger in the woodpile, and his name is *jealousy*.

Yes, many professional horticulturists are truly jealous because an ambitious fellow puts in his spare time growing flowers and succeeds in raising some perhaps as fine as the professional man.

Why not encourage the amateur to branch out, devote more time to raising flowers and perhaps originating something worth while?

We often notice in the prize schedules that the amateur exhibitor is offered half for practically the same exhibit as a professional. Now the professional is either

a large grower or a gentleman's gardener. In the case of the latter, he has all the means provided him to buy his stock of bulbs, etc., (and he gets the best), plenty of help to grow them, and loses no time in setting up his exhibit in the show room. How about the amateur? He has his stock to buy out of his own earnings, also his fertilizer, and besides his work after his day's labor in the shop or office, has to lose his time when the exhibition comes, if he has anything to exhibit, for prizes not half the value of those offered professional growers. Not that the amateur is looking for the money for the sake of the money itself, but what he secures in the matter of prizes he invariably spends for new varieties, and in this way becomes, in time perhaps, a professional, giving his whole time to floriculture.

Can not the professionals see that it is to their interest to encourage amateurs all they can; to induce others to enter the amateur field and so awaken a wider interest in the culture of all varieties of flowers, instead of trying to bury them in the professional class before they are even novices, just because they happen to get a few dollars for the sale of bulbs that they may get for themselves more of the better kinds?

I once received from the hybridizer, some cucumber seed—a cross between the White Spine and English Telegraph. The originator found a ready sale for them in the markets during the winter and early spring. I gave some seeds to a foreman on a large estate. He planted them in the greenhouse and was very much pleased with them. But he told me the superintendent said they were of no use for indoor culture. The foreman added—"you are an amateur, you know. If the superintendent had paid 25 cents a seed for them to a big seed house, and they grew only three or four inches long, he would have said they were excellent."

Let other amateurs speak up. That's the only way to progress.

We are in receipt of an article from President Charles F. Fairbanks of the American Gladiolus Society entitled "The Standing of an Amateur." As Mr. Fairbanks is a Gladiolus grower of considerable experience and no one has accused him of being a professional, his understanding of what constitutes an amateur Gladiolus grower should certainly be received with interest. This article came in too late for us to use it in the November issue, and it will, necessarily, therefore, appear in the December number.

Many New Varieties of Gladioli Produced.

By FRANK S. MORTON in Portland, Maine, *Evening Express and Advertiser*.

THE revival in interest in the Gladiolus seems to be permanent and shows no diminution. The most marked indication of its popularity is shown by foreign growers, especially in Holland, where this flower is now growing in large numbers in fields where the tulip and hyacinth have for years had full sway. Two years ago one of the new American varieties was exhibited abroad for the first time and 40 cables were received by the grower here asking for all that could be had at the seller's price. This craze has resulted in the production of many new varieties and an increased interest in the older ones. The Gladiolus is a flower that lends itself easily to the cross breeder and every seed thus produced gives a different flower. But the major portion, of course, are very much the same as the parents and it is still quite rare that a flower is produced that shows new characteristics enough to be considered worth while. The old saying that many are called and few are chosen applies in this case as while the market is yearly flooded with new varieties, very few survive, as they generally develop weak points that later condemn them. There are only about half a dozen of distinct families and nearly all of those are of foreign origin. Lemoine of France originated a family to which his name was given, which has characteristics so distinct that there is no mistaking its members. Later he further experimented with the result that another race was named after his native town of Nancy. His son is still carrying on the work in that town today.

Luther Burbank has cross bred the Gladiolus in recent years but the result of his work has so far only shown new variations in colors and combinations but no new type. All over the United States and Canada hybridizers have been at work and many beautiful flowers have resulted. But only one man has succeeded in producing a new type, possessing characteristics entirely new. This is the new ruffled Gladiolus produced by A. E. Kunderd of Goshen, Indiana, and named by him *Kunderdi* type. The petals of this flower are ruffled and fluted like the petals of the newer sweet peas. The first variety put out was named *Glory* and was a creamy pink with a narrow line of darker pink through the lower petals. Since then it has been produced in many other shades and colors including yellow,

salmon and white. His new white *Glory* is solid white with an Iris blue throat, as fine as a delicate Iris. *White King* is a rich sulphur white with throat markings.

The results of Mr. Kunderd's work are very gratifying to Americans as heretofore all the honors have been claimed by foreigners. The only family given an American name was originated in Germany and purchased and named by an American firm. But Mr. Kunderd has produced a sturdy race and there is scarcely a list offered anywhere in the world to the general public, excepting those, of course, offering exclusively the growers own bulbs, that does not contain some of his origin. Not only the ruffled type but many of the leading varieties in the other types are of his origin. One of the most popular and striking Gladioli of the present day is *Mrs. Frank Pendleton, Jr.*, which was originated by Mr. Kunderd and the first stock sold to a Boston dealer who had a branch at Bar Harbor. A contest among the Bar Harbor ladies resulted in giving it the name it bears but for some reason the stock was not increased as it should have been and it went into the background temporarily. Mr. L. Merton Gage, secretary of the American Gladiolus Society, recognized its worth and gathered in all the bulbs he could find and has increased the stock so that now it is quite generally raised and is considered one of the very best grown. *Rajah* was another variety that has always held top place and was sold to Mr. Montague Chamberlain of Boston. Last year Mr. Clark W. Brown of Ashland, Mass., swept away first prize on a new yellow named *Mongolian*, also originated by Mr. Kunderd.

The efforts of all hybridizers seem to be at present centered largely in an endeavor to produce a yellow that answers all the requirements. The yellow exists in smaller flowers in perfect shades but success in producing the same color in a large and healthy flower has so far met with only partial results. In England the Kelways claim success but the bulbs of *Golden Measure*, their best yellow, sells at such a high price that only the millionaire can afford them. In Holland two or three years ago over \$8,000 was paid for about two pounds of bulbs of a yellow variety which was named *Glory of Noordwijk*. This has been increased so that at present the bulbs are quoted as low as \$6 each. These two varieties seem at present to be

the best yellows although an American grower, Mr. G. D. Black, of Independence, Iowa, has produced a fine yellow which he calls *Golden King*. This, however, has a dark colored blotch in the center which detracts somewhat from its value.

The quest for a yellow has been aided by the discovery five years ago, growing near the falls of Zambesi in Africa, a wild species, of a clear, pure yellow. This has been given the name of *Primulinus*, or *Maid of the Mist*. It is a very small flower, quite hooded, with the blossoms quite widely apart on the stalk. Outside of being novel, these characteristics are all against it in breeding. A large quantity of hybrids have appeared but they seem to be in a class by themselves so far, being very pretty and delicate, but the yellow color when transferred to a hybrid has so far taken with it faults of size or shape that have generally kept it in its own class. Crossed with reds the results have been a variety of delicate orange, salmon and variegated colors that are very beautiful.

While a bouquet of Gladioli made up of the modern shades and colors will attract attention anywhere, those who grow them have found that a blue flower seems to be the greatest novelty. Those who have never seen any but the old fashioned red and yellow flowers are generally surprised to see a blue flower in the collection. Yet the blues are getting quite common now although the best ones are still regarded choice. A pure blue is still to be found as those called blues are more likely to be violets and purples. The best blue yet found is *Blue Jay*, originated by H. H. Groff, a banker of Simcoe, Canada. This gentleman and his American associate, Mr. Arthur Cowee of Berlin, N. Y., are to be credited with some of the finest of Gladioli. Another blue that is very striking is *Baron Hulot*, originated by Lemoine of France. This is a deep violet and purple with white marks. The blue flowers are generally smaller, but a bouquet of *Baron Hulot* and one of the yellows, mixed, is worth seeing. The blues owe their parentage largely to another wild African species known as *Papilio major*.

The old standard kind known as *America*, is still one of the most popular although its originator has introduced an improved and deeper pink which he calls *Panama*. This is the variety that was the cause of so many cablegrams as mentioned above. *Niagara* by the same producer is one of the finest of the light yellows and this trio from one breeder is hard to excel.

The Gladiolus.

Paper read by Ira H. Landis, Paradise, Pa., at a meeting of the Lancaster County Florists' Club, June 15, 1914.

The Gladiolus is becoming more deservedly popular each year, with its beautiful flowers of such wonderful lasting qualities placing it above many other cut flowers. By merely trimming a small portion of the stem away each day the same bouquet will last over a week. It may be had during a long blooming season by different plantings at intervals of two weeks from the time the frost is out of the ground until July 1 and you may enjoy their beauty for ten or twelve weeks.

This flower succeeds everywhere and responds so quickly to good treatment, and requires so little effort, that there can be no excuse for not producing good flowers. According to the varieties the bulbs will produce flowers in from sixty-five to ninety days. Well rotted stable manure is one of the best fertilizers and should be spread over the land in the fall and plowed the following spring. Plant from three to four inches deep, the larger bulbs the latter depth. The secret of growing good flowers is thorough cultivation and in nearly all parts of the country artificial watering is unnecessary, provided a dust mulch is kept on the surface to conserve the moisture. Stir the surface as soon as fit after each rain and give frequent cultivation. A sunny situation and not planted close to buildings is best.

In cutting Gladioli the greatest satisfaction is obtained by cutting the spike when the first bud opens and allow the flower to develop indoors. Every bud will open and more perfect coloring will develop than would be possible if left in the sun. Cutting the spike when the first bud opens is also a benefit to the bulb as the strength of the foliage is required by the bulb to develop for the next year's growth and for this reason always allow two or more leaves to remain. About the latter part of September or after the first frosts appear the bulbs should be taken out of the ground and allowed to dry several hours in the sun. However the more drying or curing there is done the greater the loss of vitality and only enough drying should be practiced to free the bulb of surplus moisture contained in the skin or husk so that there will be no tendency to mold. The bulbs can be stored in shallow boxes safely in a reasonably dry air at a temperature of 32 to 40 for almost an indefinite period.

Next year plant more of the varieties which do best with you.

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
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Hardy Gladioli?

From time to time Gladiolus growers have found that bulbs left in the ground over winter do not perish, but grow again the next year. This leads those with comparatively small experience to jump to the conclusion that this means that their bulbs are hardy. Hence, the origin of the so-called hardy Gladiolus. One correspondent reports that he has had bulbs stay in the ground two winters and live.

It may be stated as a positive fact that so far as known there are no hardy Gladioli. Certain seasons bulbs may survive, but this is not because they are hardy and will stand freezing, but rather because of an open winter when the frost does not penetrate the ground or because sufficient snow is present to prevent the penetration of frost. Therefore, those who think they have a hardy Gladiolus should know that the ground was frozen below the roots before they are sure.

It is, of course, possible that after the Gladiolus has been grown and developed for many long years in our comparatively rigid northern climate, that hardy varieties will be developed, or at least varieties which are half hardy and may be left in the ground over winter by moderate protection. This, however, is only a possibility.

MADISON COOPER.

Frost-proof Qualities of Gladioli.

As reported last month, the first killing frost in the Editor's garden was September 25th. Following that we had nearly a week with more or less frost every night. This practically ruined the flowers of all the different varieties of Gladioli except *Peace*. Whether *Peace* is more frost-proof than other varieties or not, cannot be stated positively, but anyway a late planting of 50 *Peace* now has a couple of dozen flower spikes which look pretty fair, although some of them are a little ragged from being touched with the frost. If other growers have had a similar experience and found some varieties that stand frost better than others, we would be glad to hear from them.

Amateur growers commonly make the mistake of thinking that big bulbs mean big flowers. Sometimes the reverse is true and the big bulb gives no flower spike at all. The important part in selecting bulbs for the very largest and best bloom is that the bulbs should be both large and young. In buying bulbs from someone else the age cannot be known, but in planting bulbs of one's own growing the young and plumpest bulbs are the ones that will give the best flowers. Two years from bulblet is the right age.

Breeding New Plants.

METHOD BY WHICH THIS MAY BE ACCOMPLISHED.

By ERNEST BRAUNTON in *Los Angeles Times*.

So many readers of this department have written to ask how the writer breeds new plants that the methods pursued must be of interest to a large number who wish to experiment, but know not how. Therefore the "process" is herein briefly described.

Start with some easy subject, one with coarse and simple organs few in number. The writer's pet hobby, the Gladiolus, is a good example. Cross lilies with lilies, carnations with carnations, for you cannot cross plants not closely related, and not all that are. The exceptions to this rule are few and therefore will not be considered at present.

To cross two plants you must put the pollen of one flower on the pistil of another, and do so before the wind, insects or natural processes get ahead of you, or you may fare nearly as badly as the horse owner who was told to give his horse a powder thus: "Make a tube of a rolled-up paper—put the powder in it—place one end in the horse's mouth and blow." Unfortunately just at the critical moment the horse coughed, and the result so discouraged the man that he gave up further trials. Crossing flowers differs from the case cited in that if you do not move the powder first there will be nothing "coming your way."

Each stamen has three parts—a needle-like stalk, an anther at the end of the stalk, and the pollen in (or upon) the anther. The pollen is the vital element. It is dust-like and often highly colored, though more often white or yellow. Without this pollen no seeds can be formed. The pistil (sometimes a group of several) occupies the precise center of the flower; the anthers are "outside" of these. The pistil also has three parts, though the lower part (the ovary) is not always in evidence. The stalk is thicker than that of the anther, and on the upper end is a stigma, usually a warty, knob-like structure. Upon this stigma the pollen should be placed.

In "perfect" flowers, or those having both stamens and pistil, the former must be removed before the pollen is freed or the flower may become self-pollinated. The flower should then be covered by an inverted paper bag, the mouth of which may be tied about the flower stem to prevent its blowing away or the entrance of bees or other insects. The next day re-

move the bag, place upon the stigma the pollen of the other parent and replace bag. This work should be repeated, by the amateur at least, for three consecutive days. Pollen may be transferred by picking an anther and gently rubbing some of its pollen off on the stigma by a camel's-hair brush, or by the point of a knife-blade or toothpick. The writer uses the latter. Only one grain of pollen acts, though you may transfer thousands.

"Panama"

ORIGINATED BY FRANK BANNING.

The qualities which have given the variety *America* its great popularity have helped equally in making *Panama* its worthy successor. Both *America* and *Panama* have a solid color and a straight spike and are reasonably healthy and vigorous. They both sustain a considerable number of large flowers open at one time. *America* has been popular for a dozen years and will doubtless continue to be popular, but the coming of *Panama*, which is very similar to *America*, except in color, has resulted in a rival to *America* which bids fair to outdo its parent. In the opinion of many, *Panama* excels *America* in color. The pink of *Panama* is much deeper and attracts the eye more quickly. Although comparatively large quantities of bulbs of *Panama* have been available, yet the price still remains high.

Mrs. Francis King, the eminent floral writer, in describing *Panama*, says:

"I here declare, speaking with all possible calmness, that it is the softest and most charming tone of pronounced rose pink I have ever noticed in a flower. It makes one think of roses, particularly of 'Mrs. John Laing'; and while I have never fancied the idea which obtains here and there of growing Gladioli among roses, because of the leggy look of both roses and Gladioli at their best, yet, if it must be done, *Panama* is the flower to place in our rose beds. The pink of the *Panama* is that called Mauve Rose (color chart Rose Malvace No. 2.) Almost invisible markings there are, deep in its throat a purple carmine. (Carmin Purple No. 2.)

"A setting of lyme grass (*Elymus arenarius*) is suggested with perhaps nearby a few blooms of the new small decussata Phlox of luscious pink, Elizabeth Campbell, while the Phlox is lighter in tone than the Gladiolus, the pinks are of precisely the same type, for I have compared the living flowers."

MRS. AUSTIN'S TALKS FOR
AMATEURS.NO. 10.—THE SEASON OF THANKFULNESS—
THE \$1,000 BULB.

We are as busy as ever, busy in a contented fashion for we know that we are ready to do the work that is before us. The summer went all too quickly and the garnering of the fall crops is finished, but the joy of the work is still with us.

The cellar, which during the summer seemed so large and cold and empty, now has an inviting aspect. Perhaps it's partly because we know of the fruit cupboards filled to overflowing with good things from orchard and garden, and of the jams and jellies and conserves and delicious pickles, and there's a good supply of cucumbers packed in brine in the old-fashioned way and in the same old six gallon crock used by our grandmother. There will be no doubt about their *keeping*, and there is a flavor to old-time salt pickles now almost forgotten. There are other curious shaped old crocks of colonial times, which were formerly filled with sweet pickles and preserves, but we have found them so peculiarly suitable and decorative in their soft gray shades, when filled with the long spikes of Gladiolus blooms that they have been promoted from cellar to porch and living room.

Under the cellar stairs, the coolest place, there are baskets of pears and apples, beets, turnips, and other wholesome vegetables, a few only of each, placed there to be handy, for the real winter provisions are buried in a corner of the garden and opened only to renew the cellar supply. How fresh and crisp they are when taken from their "cold storage" with none of the delicious flavor gone. It is a good way to keep them and there isn't room for them in the cellar with all those tiers of trays of Gladiolus bulbs. The tangy odor of the bulbs mingling with the spicy fragrance of the fruit impresses us, and brings a sense of the bountifulness of the gifts bestowed upon us and we feel more than ever that it is a season of thanksgiving.

The weather is clear and cold and the honk, honk, overhead of wild geese in migration warns us that real winter is well on the way.

Our work now is the cleaning of the large bulbs, and we are hurrying to get them done ready for shipment to the florists before severe freezing weather. They are such large, plump, brown

beauties that we feel we did not labor in vain during the past summer when a part of the time, almost constant cultivation was necessary to retain moisture to keep them growing. While there is usually a good combination of rainfall, sunshine and other natural forces necessary for producing good crops in this section, we sometimes have opportunity to try out some of our theories in regard to *dry farming*, without leaving the state of Ohio, but when we thought we were about to have that opportunity, the rains came, and the flowers came too, such great wonderful ones, that we were convinced that in absence of natural rainfall, it would be very wise to resort to irrigation.

The bulbs are now sufficiently cured so that the roots may be taken off easily, and we have the bulb tables heaped high with them. These tables are made purposely, measuring 6 ft. long, 4 ft., 2 in. wide, 27½ in. high and so constructed that they may be folded when not in use. A narrow strip on the sides which comes ¾ in. above the table prevents the bulblets from rolling off. This size table will accommodate six workers, and there is sometimes a merry company and lively contests when the tables are all full. Many hands make light work, and the quicker the bulbs are shipped the less danger there is of freezing enroute.

The orders are coming in and we note that although many of the new and late varieties are excellent drawing stars, the beautiful lavender-pink *America* is still the great prima donna on the Gladiolus stage of beauty. Every one wants *America*. It would be hard to estimate the number of homes that have been embellished by its blooms and the added beauty that this one variety has brought into the world, and this again brings the old query, "Is a bulb worth one thousand dollars?" We believe we can settle this question for aye by giving our experience.

A number of years ago we purchased a small trial lot of a light mixture and watching the growth closely we soon noticed one of extra strength which, when in bloom, proved to be of marvelous beauty. Realizing its value we saved almost every bulblet, even sifting the soil through a fine sieve. Once we came near losing the entire stock through a sudden hard freeze and only saved it by chopping them out with a pick.

About the time we had enough to introduce, a wonderful new variety named *Reuben H. Warder* was placed on the market. We purchased a few and found it to be identical with the one we had, but

did not feel sure enough to offer our stock for sale especially as the introducer claimed to have raised it from seed and had sold none of the bulbs. Not long after this he sold his stock to a leading Gladiolus grower who renamed it *America*. We again purchased a few for comparison and when they bloomed we knew we had the great *America*. Several growers claimed to be the originator, and the controversy which followed did much to bring Gladioli to public notice.

From that one bulb we have grown acres, being, we believe, at one time one of the largest growers of *America* in the world.

THE BULB WAS WORTH ONE THOUSAND DOLLARS.

MRS. A. H. AUSTIN.

Echoes from the Boston Show.

From *Suburban Life*.

In Mechanics' Hall was a "trade" exhibit, comprising commercial plants for the decorative florists' trade and the appliances and sundries that enter into the production of plants and the ultimate handling of the product, and also the display under the direction of The American Gladiolus Society.

Here let it be noted that the present year has been generally most favorable for the development of the Gladiolus, and the New England growers had wonderfully fine material to stage in quantity. But they had no monopoly on quality, for A. Cowee and T. A. Havemeyer from elsewhere had displays impelling attention. Messrs. T. A. Havemeyer, C. F. Fairbanks and T. Cogger each received awards in the open classes for this flower. If never before the Gladiolus has assuredly come into its own this year, and has ably demonstrated its worth as the garden standby for August, whether for outdoor effect or for cutting. The abundant, seasonal rains have given ideal conditions, and growths of even six feet (too large indeed) have been told about!

Turning now to the impressions gathered from these combined displays, a few among the host of varieties seem to stand out pre-eminently—which is not to be understood by any means as suggesting that any not named here are necessarily inferior; our purpose being rather to convey to the reader the "crystallization of impressions" of the various displays. Among them are naturally well known names. Probably, as the one best of all for general all round use *America* would

be the selection—strong, massively flowered, delicate clear pink, it is a flower that fits in to any purpose. In yellow, *Canary Bird*; in blue (really purple, however) *Baron Hulot*—and those two, be it noted, make a splendid combination; for bright salmon, *Dawn*, with its wonderful luminous quality, with *Mrs. Francis King* on a more intense or deeper general tone of color; *Hollandia*, a "terra cotta"; *Schwaben* as a delicate, yet rich, cream yellow.

Among other worthy kinds shown in much smaller numbers, we must name *Badenia*, a "pale blue" or deep blue-lavender; *Magnum*, pale delicate lavender; *Panama* and *Niagara*, now fairly well known; *Pink Perfection*, perhaps well described as a lighter *Dawn*; the richly colored *Mrs. Frank Pendleton*, recalling forcibly an old-time show pelargonium; *El Capitan*, pale yellow and, as shown here, with solid spikes of remarkable length. *Orange Glory*, the latest addition to the frilled *Glory* family, has an attractive color with the characteristic form of flower that marks that group.

Among the white flowers *Europa* made the greatest impression on the eye, but the growers agree it needs more water than most other varieties.

Mrs. A. H. Austin and Mrs. Francis King offered prizes for the decorative uses of the Gladiolus, and in each case, Mr. Cowee won, showing effective baskets and corsage arrangements. Eugene Fischer was awarded the Gladiolus Society's Award of Merit for a set of new seedlings not yet named or introduced.

Panama.

This magnificent variety which, was originated and distributed by the late Mr. Frank Banning, of Kinsman, Ohio, is a seedling of *America*. It was grown and on exhibition on the trial grounds of the National Gladiolus Society near London, Eng., in 1912, where it was at once recognized as of great value and was awarded a Certificate of Merit, also a Silver Medal by the Royal Horticultural Society of London. At the annual meeting of the American Gladiolus Society at Chicago the same year, it was awarded the Michell Bronze Medal for finest pink. Since that time wherever exhibited it has attracted the attention of all visitors and repeatedly been called "the finest pink yet offered."

It is similar in form and growth to *America*, but the flower is larger and of a beautiful shade of rose pink. The habit of growth is sturdy and vigorous, with dark green foliage.

WAYSIDE RAMBLINGS.

CYCLE OF PLANT GROWTH.

TO THE EDITOR:—

Referring to your recent editorial regarding the habit of the Gladiolus in the matter of growth and rest periods:

The tuberose, as nearly as I can tell from outdoor growing, has normally no rest period, but only accepts the resting condition when that is forced upon it, and accepts it at any stage in its history, taking up its growth again at precisely the stage at which it left it when it became dormant. This I do not think is true of the Gladiolus, but it could be tested out in greenhouse.

The directions commonly given for curing Gladiolus bulbs, "Let dry a day or two, and then cut off the stem an inch from the bulb," strike me as ludicrous, because, when I dig my bulbs, if I attempt to pick up the bulb by the top, the bulb falls loose from the top by its own weight, the leaf and stem being totally dead, and practically already shed, requiring but slight effort to free the bulbs from them. The Gladiolus, I feel sure, has its seasons, the same as an apple tree, and what are leaves for this year cannot be made to continue growing for service next year. I understand, too, from the authorities, that however short the period of growth may have been this year, and apparently insufficient, the bulb when planted next year, is as truly a year older as is the bulb which grew the whole season, and accomplishes practically the same.

The question, however, as I understand it, is as to whether the rest period, which under our conditions is over winter, and during which the bulb is undoubtedly undergoing changes, can be materially shortened, or be done away with, without detriment to the results desired of the bulb. The rest period desired by the bulb is undoubtedly less than it has to take, for, unless the storage be very cold, or both cold and dry, the bulbs begin growth in storage February first, and it is only by constant vigilance and care in stirring and airing that they can be prevented from developing a full root system and starting tops before spring is sufficiently advanced to permit their being planted. In connection herewith I wish to state that any growth made by the bulb before planting is at the expense of the strength of the bulb, notwithstanding remarks in August issue in regard to planting started bulbs are to the contrary.

As I have already stated, it is practically

certain that all plants which normally have a dormant season, undergo changes during that period which have to do with their return to active growth, for without the dormant period they refuse to start again into growth, or else grow with but indifferent success. Different means have been discovered, however, for hastening this dormant period, or for accomplishing its processes, within a very short period of time, perhaps only a few hours. For example, some kinds of seeds which under ordinary circumstances take a dormant period of one or two years before they will begin to grow, can be made to grow the first season by hard freezing, or by treating with boiling water. Soft forms of growth, such as bulbs and twigs of deciduous trees which have just finished preparation for winter, can be started into growth at once by immersing for a while in water at 100° F, or by subjecting to the vapor of ether or of chloroform. The practical effects of such treatments are subject matter to be left for trial and proof to growers who wish to force blooms out of season. I do not see how, in the matter of the Gladiolus, they have any practical application for the grower, except as its demonstration may affect his market. It might pay a grower of rare stock to install a greenhouse for all the year growing, and so double seasons on valuable material, but for stock which has become inexpensive, there could be no object in it. Possibly, however, a grower where the whole warm period is favorable to young and vigorous growth, could plant spawn in the spring, dig it after a strong growth was under way and dry it off as yearlings, treat his yearlings, replant, and harvest in the fall as two-year-olds. That could not be done here, because late planted bulbs cannot be depended upon, owing to excessive drouth and heat during the summer.

The details of treatment, whether by chilling, by hot water, by vapor or ether or of chloroform, or by exposure to the sun, would have to be tested out very carefully, as excess of any of them will kill the bulb.

B. C. AUTEN.

THE \$1,000 GLADIOLUS BULB.

There has been considerable discussion in your magazine as to whether or not a single bulb of Gladioli is worth \$1,000, supposedly a seedling variety. There have been several named varieties that have proved to be commercially worth that amount and more to the one who has worked up the stocks of them. But who knows that a seedling variety will

be worth that price until it has been thoroughly tested, and every experienced grower of novelties knows that this means several years' trials to prove its vigor, propagating qualities for increase, healthfulness, etc., and by the time it has stood all the tests there is quite a fair number of bulbs in stock, so who would be foolish enough at this stage of the game to pay \$1,000 for a single bulb out of this stock of, perhaps, 500 to 2,000 bulbs (in all sizes)? A person might take a gambler's chance on the first bulb, but that would be a mighty poor business proposition.

So I would say that from a common sense summing up of the subject that there has never been or will be a single bulb of Gladioli worth \$1,000, purchasing price.
L. MERTON GAGE.

OVER THE BARGAIN COUNTER.

If it is true that this country is to be again the dumping ground for the Holland Gladiolus growers, there are some things that ought to be more generally understood by purchasers on this side. Comparing price lists we find that their prices are twenty-five to fifty per cent lower than ours, and many are deceived thereby, for a Yankee dearly loves to get a bargain. But is it reasonable to suppose that men who are expert in raising and selling bulbs would knowingly sell ten dollars' worth for five dollars? The plain truth is that the imported bulbs are inferior in quality, almost invariably arrive in poor condition, and are not by any means a bargain even at half the price of home product. They are grown under very different conditions from those which exist here and one or two years are required to get them acclimated to our soil and climate.

In my limited experience not over fifty per cent can be counted on to bloom the first year and at least twenty-five per cent must be thrown out on account of disease, besides a lot of culls.

Is it reasonable to expect our growers to meet foreign prices under such conditions?

S. E. SPENCER.

EUROPA AND WHITE LADY.

On reading the various articles in the last number of the GROWER I found myself wondering what the climatic conditions were in the locations of the writers of articles, in order to measure the probabilities as applied here (Oregon). And that suggested the idea that your attach-

ing the name of the state to these writings might also be appreciated by others.

I think it a good thing to get reports of the doings of the prominent varieties from different points, for to arrive at the exact facts of a subject, all phases must be analyzed. In September number Mr. Huntington relates his experience of *Rochester White* and *Europa*. I assume that he considers *Rochester White* and *White Lady* nearly synonymous. My results with these for the past two seasons have been so different that it may be worth while to state the points. The summer of 1913 was my first test of *Europa*, obtaining them from different growers. Planted under identical conditions, all *Europas* were smaller in flower and weaker in growth than *Rochester White*. One corm failed entirely to grow, which I assumed to be from weakness. Also *Europa* showed a tendency to blush too much, while the stain in the throat and the lavender stamens robbed it of the spotless white character possessed by *Rochester White*. Close by, the vigorous growth and spike of larger and more shapely blossoms of *Rochester White* was very noticeable, and it was white without a blemish. In the fall when the corms were dug I found more than three times the number of cormels attached to *Rochester White* than to *Europa*. In order to make sure that last year's doings were not unusual I imported *Europa* corms this spring from Europe. The showing so far has been practically identical with last year. Just what our particular climate has to do with this result I cannot say, but *Rochester White* seems to be at home here.

CHAS. F. BARBER.

TIME OF BLOOMING.

TO THE EDITOR:—

Having read in your magazine an inquiry for information in regard to time it takes for different varieties to bloom, I enclose a list of Gladioli on which I made note of the planting and blooming time.

Variety	Planted	Bloomed	Time
<i>Peace</i>	May 20	Aug. 11	83 days
<i>Augusta</i>	" 24	" 20	88
<i>Mephistophiles</i>	" 20	" 2	74
<i>May</i>	" 20	" 10	82
<i>Rosella</i>	" 20	" 9	81
<i>Scarsdale</i>	" 24	" 5	73
<i>Eugene Scribe</i>	" 24	" 10	78
<i>America</i>	" 24	" 25	93

The weather conditions were very favorable, plenty of rain during blooming season.

FRED'K H. LOSEY.

NOTE—The above is a record from central New York.

The Modern Gladiolus.

GARDEN NOTES BY MRS. WILHELMINA SELIGER in *Hartford Times*.

AFTER the roses have had their season of profuse bloom, other flowers follow in their appointed time, to delight us with their beauty or fragrance, and at present the brilliant colored, large spikes of the Gladiolus, these bulbous plants with sword-like leaves, make a magnificent floral display. We have in our city a number of amateurs who make a successful specialty of certain flowers in their horticultural pursuit, and one of them is James M. Adams, of No. 466 Franklin avenue, whose wonderful collection of the best known forms of the hybrid Gladiolus furnish a rare pleasure in the remarkable color combinations and shades which have been produced by improved methods of hybridization. Mr. Adams has among his collection 235 varieties, one or two of each kind planted; they were selected out of 150,000 Briermor seedlings, the product of the extensive fields in cultivation owned by B. F. White of Pequabuck, this state, (Connecticut.)

It is a natural habit of the Gladiolus that the bulbs increase fast by producing a number of small bulblets or seed bulbs; and these planted out again the next season, grow in a year or two to blooming specimens while also keeping their perfected strains. Of such bulbs Mr. Adams has several beds, and in another interesting, smaller bed, screened by wire netting, are plants raised from the seed, hybridized by Mr. Adams, of the best, original Gladioli. When these begin to bloom there will be new revelations of form and color, and as time passes the popularity of these flowers for cut flowers to be raised in their season in the open garden, will increase greatly as they are less expensive to produce than in a greenhouse by artificial heat.

Like other improved flowers, the Gladioli of hybrid origin are named, to keep their strain intact and show the nature and merit of each individual blossom. We noted especially handsome ones, for instance:

Peace—One of the finest hybrids ever introduced. It is the nearest approach to a clear, pure white, with a delicate lilac feathering, the spike measuring above a yard, containing seventeen buds, of which the ten lower ones were fully developed and expanding over four inches.

Others are:

Farmington—Large flowers, dark, rich pink, shaded beautifully on the edge of the petals.

Klondyke—Clear primrose yellow with blotch of crimson maroon.

Rosella—Light rose stained purple and white.

Victory—A very fine yellow with palest rose.

Negerfurst—Very dark velvety red with black spots flamed with white.

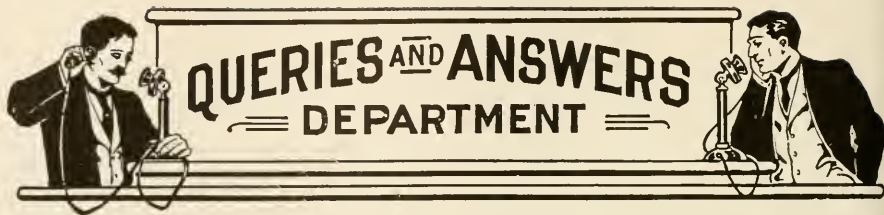
Witch—Mottled red petals stained white with a vein of old gold.

Baron Hulot—Dark violet, one of the most remarkable colors of purple to be found in a Gladiolus, distinct and rare.

Daytona—A beautiful mauve, shaded darker toward the base of the petals, the lower ones marked with peacock feathering.

America—Soft lavender pink. This flower received much admiration in the famous collection of Wilhelm Pfitzer of Stuttgart, Germany, where it had been introduced as an American hybrid. It is almost of a single color, pale lilac-rose resembling a cattleya. In such a bewildering display of color it is impossible to discriminate distinctly each different one. They have to be seen to be appreciated, and to realize the labor and the love and care to produce these perfect blossoms.

There are diverse strains of Gladioli in this country, according to the successful originators of the hybrids, which are known as the Childs, Briermor, Kelways, Groffs, Burbanks, Grays, etc., and in France the Lemoines of Nancy and the Pfitzers of Stuttgart in Germany, which are both of world-wide reputation, and visitors describe these enormous plantations, consisting of millions of perfect flowers and of first and second year seedlings, as something wonderful to behold. A pleasant incident is told of one occasion, when a party of visitors had been invited to judge a field of new blossoms for a name. They could not well agree about a correct one and were in a dilemma, when suddenly a Zeppelin airship, the Schwaben, appeared above the field, and this decided, all at once, the name to be *Schwaben*. It is a sulphur-yellow color with pale red stripes in its throat. The fortune of the modern Gladiolus as a popular garden flower is coming rapidly since it is easily grown. Deep planting of the bulbs in clean, good soil, and plenty of sunshine, are essential to its success, and the wonderful color combinations produced by the simplest elements of Nature, of earth, water and light are forever a mystery of its unseen forces.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Harvesting, Curing and Storing. Gladiolus Bulbs and Bulblets.

TO THE EDITOR:—

You have, I think, given directions for caring for Gladiolus bulbs during winter, but I would like some simple directions for taking care of them in a small way as I am a small amateur grower and have no special facilities for this purpose. I would particularly like to know about proper time of digging and as to cutting off the tops and how and where to store them.

J. N.

Answer:—Your inquiry is really a little bit late so far as directions for digging is concerned. However, nothing special in the way of instruction is really needed along this line. The bulbs are easily removed from the ground by driving a spading fork straight down alongside the row and below the bulbs, and about three or four inches distant therefrom. A prying motion loosens or breaks the roots from the soil, and the old bulb and the new bulb with its attached bulblets can easily be drawn out by means of the top. The time of digging is usually from Sept. 15th to Oct. 15th, or even as late as Nov. 1st. Cut off the top promptly within half an inch or so of the bulb. If weather is suitable and it is convenient, the bulbs may be exposed to a circulation of the air or even to sunshine for a day or two. Then they are best placed in the cellar. After two or three weeks the old bulb and roots may be removed from the new bulb and bulblets. The large bulbs in small quantities are best stored in paper bags or baskets but they should be protected with paper covering. Bulblets should be mixed with about an equal volume of sand or earth and kept in tin cans with covers off or partly ventilated to prevent drying out too much. If the sand is a little damp so much the better, but it must not be wet. The large bulbs in paper bags may be hung in the cellar where potatoes are stored and they should keep perfectly until wanted for planting in the spring.

The question was not asked but the bulblets if not allowed to become too dry

may be planted early in the spring about three inches in depth in a row about the same as peas would be planted. These in good soil should make rugged growth and possibly some of them will bloom the first season and they should all make flowering size bulbs for the second season. See article on "Growing the Gladiolus" in the May number.

MADISON COOPER.

Gladiolus Preacox.

TO THE EDITOR:—

Will you please describe the species or variety known as *Preacox*. I see this mentioned in connection with hybridizing and would like to know more about it and where it can be secured.

S. W. F.

Answer:—*Gladiolus Preacox* is a strain that was first offered by Haage & Schmidt of Germany a few years ago, and their claim for it was its earliness in blooming from seed, that is to say, it would bloom the same year the seed was planted.

The writer saw it tested the first year offered and found it to be no more than a strain of Lemoinei type, seed of which very often blooms the first year.

I. S. HENDRICKSON.

Removing Old Bulb from New.

TO THE EDITOR:—

Please tell me whether it is correct to break out from underneath the new bulb the old wizened up one at the time when the bulbs are dug in the fall. I am new at the business and any information you can give will be appreciated.

H. W. B.

Answer:—The old bulb should, of course, be removed from the new one together with the roots and small bulbs or bulblets. This work could, if desired, be done at the time the bulbs are dug, but usually a drying or "curing" process is allowed of a week or two or several weeks, as then the old bulb and the roots will be dry and will break off easier. You understand, of course, that the stalk should be cut off within half an inch or so of the new bulb at the time the bulbs are dug.

Digging and Curing Gladioli.

As soon as the frost has killed down the foliage the Gladiolus bulbs should be lifted and dried off. Keeping the varieties separate, the bulbs, with the tops attached, should be laid out in layers either on a light, dry shed floor, or on boards in the open air where they can be protected at night during frosty weather. A set of boards or frame shutters spread along on the south side of a building make a very fine place to dry them off and fully ripen the bulbs. Have plenty of covering handy that can be thrown over them on cold nights. When thoroughly ripened the bulbs can be broken from the tops and packed away. Look the bulbs over carefully for any diseased spots and if any having these are found, keep them separate from the sound ones, for it is the prevailing opinion that the disease may be communicated to a sound bulb by coming in contact with a diseased one. Of the finer varieties and those which it is desired to increase, save all the small corms, and these can be planted to grow on in succeeding years to make flowering bulbs.

There are so many new and meritorious varieties now being placed upon the market that the grower who has a market for Gladioli should make it a point to use these, for the advance has been very rapid and many of the new ones are far ahead of the older varieties. This flower has forged rapidly ahead in the last few years as a cut flower, and with the improvement now going on is bound to retain its popularity. — *American Florist*.

Get Ready for 1915.

It is not too early nor is it too late, if your ground is not frozen, to prepare your soil for better bloom next year than you had this year. First apply well rotted manure if it is available. If you do not have the well rotted kind, use the oldest you have and, if applied this fall, it will be pretty well rotted by spring. Apply a couple of inches of manure and spade deeply eight to ten inches, turning the manure well to the bottom. Apply wood ashes any time during the winter, but not too heavily. Spade thoroughly in the spring again before planting. Be sure that the wood ashes and manure are both thoroughly mixed through the soil.

Paul L. Ward, Hillsdale, Mich., sends us his price list of fall planting stock. Mr. Ward is to be commended on making delivered prices and guaranteeing delivery on everything. His list includes all the better known hardy flowers.

American Gladiolus Society.

President Fairbanks has announced the appointment of the following committees:

MEMBERSHIP COMMITTEE.

F. S. Morton, Portland, Me.
L. M. Gage, Natick, Mass.
Ralph E. Huntington, Painesville, Ohio.

PRESS & BULLETIN COMMITTEE.

Madison Cooper, Calcium, N. Y.
Mrs. A. H. Austin, Wayland, Ohio.
Clark W. Brown, Ashland, Mass.

The Exhibition Committee will not be appointed until the place of the next exhibition is determined by the Executive Committee.

The December MODERN GLADIOLUS GROWER will complete Volume I. If you have not thought about it, just go back and see what a lot of practical information there is in the eleven numbers already printed. When the December issue is out we will have ready a complete index which we will send to all subscribers free.

Statement of the Ownership, Management, Circulation, etc., of THE MODERN GLADIOLUS GROWER published monthly at Calcium, N. Y. required by the Act of August 24, 1912.

Editor, Madison Cooper, Calcium, N. Y., Managing Editor, Madison Cooper, Calcium, N. Y., Business Manager, Madison Cooper, Calcium, N. Y., Owner, Madison Cooper, Calcium, N. Y.

Known bondholders, mortgagees and other security holders, holding 1 per cent or more of total amount of bonds, mortgages or other securities. None.

(Signed) MADISON COOPER.

Sworn to and subscribed before me this 30th day of September, 1914.

(Seal) (Signed) GEO. A. LAWYER,
Notary Public.

(My commission expires March 30, 1916.)

G. D. Black, Independence, Iowa, has ready for distribution his wholesale list for the season 1914-1915. It will be sent to the trade on request. Mr. Black lists all of the more popular varieties and many novelties.

We offer for Fall delivery: Panama, Niagara, Europa, Pink Perfection, Princeps, Princepine, Mrs. F. Pendleton, Peace, and El Dorado, etc., at very reasonable prices. Send list for quotations. We do Wholesale business only. W. E. Kirchhoff Co., Pembroke, N. Y.

We offer stocks of America, King, Brenchleyensis, Princeps, Klondyke, Baron Hulot and Mixtures. In Dahlias we have large stocks of Sylvia, Jack Rose, Red Husar, Prof. Mansfield, Hallock, etc. Let us know your wants in our line.

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R. F. D.

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Rose Bud

Myrtle

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The New Lilacs,

the queens of their color, Mad. Lemoine, Pres.

Grevy, Belle de Nancy, Chas. Joly.

ASK US TO TELL YOU ABOUT THEM

Wedge Nursery, Albert Lea, Minn.

In December Issue of THE MODERN GLADIOLUS

GROWER we will show you an illustration of

Another New Race of Our Ruffled Gladioli

Our Offerings this Season will include a collection of grand new Ruffled, and also Plain Petaled kinds.

As the Originator of that gorgeous variety **Mrs. Frank Pendleton**, we have taken special care to grow an extra choice stock of it in all sizes, to offer our trade at very moderate prices.

Also **Myrtle** (awarded Silver Medal by the Massachusetts Horticultural Society.).

Red Amarillas awarded First for best Red at the Society of American Florists' Convention in Boston in August. And many others you will find unsurpassed if equaled. No other such collection of Ruffled Varieties in the World.

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A. E. KUNDERD

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THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.
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No. 12



GLADIOLUS—JANE DIEULAFOY.

(For description see page 174.)

The Perpetuation of Species.

A DISCUSSION OF GENERA, SPECIES, VARIETIES AND HYBRIDS.

By W. W. WILMORE, JR.

AT times I have been greatly amused when reading certain articles in newspapers, magazines, journals or monthly periodicals on various plants and plant life, referring generally to their perpetuation, reproduction, hybridizing and crossing of varieties, etc. Some articles are so ridiculously absurd that for the love of the profession and the pleasure I take in setting right the misconstrued conceptions of others, I offer the following:

In a certain daily paper whose circulation is over 150,000 the following article was printed.

"Mr. — of — has originated a new dahlia which is almost blue, he has accomplished this feat by crossing a white variety of the dahlia with a blue variety of delphinium. Mr. — asserts that upon his next attempt he will be able to produce a variety as blue as the cornflower. He is also experimenting with crosses between the sweet pea and the dahlia and is confident that he will soon be able to scent the flower of the dahlia with that of the sweet pea."

What do you think of it, have you at any time read a similar article? Have you heard or been asked questions like this? "How do you keep your bulbs from mixing?" Same may be growing in separate rows two and one half to three feet apart. If the questioner would first stop and consider the cause of crosses between two varieties, or how the cross is accomplished he would not ask a question of this kind.

Other common questions are, "How are new varieties obtained?"

New varieties are obtained from seed or by sports, the latter are diversions from their proper field.

"How can you tell what the results will be when seed is planted?" No one can answer this question. Save the offspring that promises good. Destroy the remaining ones.

Many other similar questions are asked daily without forethought.

Another common remark. "Isn't it wonderful when one stops to think of the new creations of Luther Burbank" (or some other prominent man who has done a great deal in his line)? No. Mr. Burbank has created nothing, nor has any other human ever created anything, nor has any human hand ever destroyed anything. We have neither power to create or destroy. We may be able to change the physical appearance of an object, we may be able to change its form, its color, its stature, its habits, we may take its

life, if it be a living object, but we cannot utterly destroy it. You may burn a building, to all intents and purposes you have accomplished a complete destruction, but consider it from a scientific standpoint and you have simply wrought a chemical change.

Sir Walter Raleigh, it is said, once made a wager with Queen Elizabeth that he could weigh smoke. To prove his assertion he weighed out an ounce of tobacco, this he smoked, the ashes were then weighed, the difference of weight exacted; thus the lost weight must be in the smoke.

In this same fashion we are able to create. We can unite two or more elements, units or beings and use them to any essential purpose. We may combine certain objects to obtain any required result or the progeny of two individuals to obtain a different product but we can not make something from nothing.

The human hand can neither create nor destroy nor can it work contrary to the laws of Nature. It can not bring together two objectionable quantities or qualities without destroying one or the other, nor can it keep two favorable quantities or qualities apart. For example, imagine the combination of fire and water, night and day, harmony and discord, sorrow and contentment, purity and blasphemy, life and death, etc. On the other hand, forbid the insect from sucking the nectar from the blossom, forbid the sun to rise, the birds to nest, the smile of youth, the rainbow in the east, forbid a thousand and one others and you rule not one. Nature has set a standard from which to work. Comply with her rules and success is unbounded, work contrary to her laws and your labor is condemned before it is begun.

Could you imagine the offspring of two parents, one a rabbit the other a squirrel, or one a vulture the other a dove? Imagine the cross of two parents, one a sturdy oak the other a lofty pine, or again one a rose the other a carnation. Could you imagine such?

No. Why?

Because the parents are of different Genera, it is against the laws of nature. These are utterly impossible. It is in many cases impossible to cross two species of the same Genus especially if the species are widely separated but when this cross is accomplished, which is extremely ex-

ceptional, then only with closely related species, the result is called a hybrid.

Take for example the Genus *Iridacea* which comprises the *Gladiolus*, *Iris*, *Crocus*, *Montbredia*, *Trigridia*, *Fresia*, etc. Never yet has there been a recorded hybrid of any two of the species mentioned. We are able to cross the different species of *Gladioli*, *Iris*, etc., with few exceptions because they are closely related but we can not cross diverse species.

In cases of true hybrids it is a common law that hybrids inherit the undesirable qualities of both parents and nearly always become heterosagget (sterile in sexual power). Take for example the mule. This animal is a true hybrid. It has inherited the stubborn, lazy and careless disposition of the ass, plus the cunning treacherous kick of the wild horse, and is also a true heterosagget. This proves the fact that it is not Nature's wish even for species to cross.

Let us now take into consideration the varieties of species. These we are able to cross as though they were the threads of a net. We are at the point of perpetuation to which the law of Nature reigns supreme. In crossing the varieties of plants which depend largely if not wholly upon their seeds for distribution and perpetuation, Nature has employed many agents to enforce and carry out her laws. The pollen of one flower is carried to the stigma of another in various ways. Insects are attracted by the color or scent to secure the nectar of the flower, his hairy body or legs are covered with pollen as he brushes by the stamens in his haste to rob the blossom of its store. At his next stop in search of food the receptive stigma or pistil which in most cases secretes a sticky substance, glues to itself a portion of the pollen from the insect's body causing a cross pollination. The wind bears the pollen from flower to flower. The birds play their part in the natural struggle of plants for existence. Many plants are capable of self-pollination although the foreign pollen has the preference when the two fall together on the same stigma. Other plants are utterly incapable of self-pollination as the stamens are dried and tucked aside or fallen when the stigma becomes receptive.

These points I bring out to show that plants of the same varieties only are capable of reproducing their likenesses, and that true species can be crossed only by the skillful hand of man, and then only with closely related species of the same genus.

How much more would one accomplish in life if he first knew the laws that gov-

erned his subject and followed them. It is as foolish to disregard the laws of nature which control plant life as it would be to forget her law of gravity and step from a high tower and not expect to fall.

Gen. 1-11.—*"And God said, let the earth bring forth grass, the herb yielding seed, the fruit tree yielding fruit after his kind, whose seed is in itself, upon the earth: and it was so."*

The writer is not a disciple of Darwin. It is his opinion that the same species of fish that swim the seas today, swam there in the beginning, the same species of animals evident upon the earth today were here in the beginning, the same species of fowl that fill the air nested on the earth in the beginning, nor does he think the ancestry of the human race chattered to each other as they leapt from limb to limb in the jungles of the heart of Africa. The same species of plants that carpet the earth today made green the hills and valleys before the birth of man. True it is that many species of both kingdoms have become extinct while others have become seriously modified in their struggle for existence.

From fossils taken from below the earth's surface which have been buried no man knows how long, we find the prints of skeletons of fishes, leaves, sea-shells, twigs, branches, reptiles, etc., resembling and in some cases such as leaves, identical with those of our present species. On the Table Mountains which range immediately against the foothills of the Rockies directly west of Denver are found petrified palm trunks, in the fossil rock is found the prints of their leaves. How many years has it been since North America was tropical? Yet these palms are similar to those growing in the tropics today. In the lime rock we find the oyster and other shell fish who are in appearance the same as their descendants of today. The petrified forest of Arizona reveals species of trees growing today.

In Lost Lake (Rockies of Colo.) are found solid pitch pine logs which have been preserved for ages, the peculiar circumstances which surround this coincidence is that this cemetery of dead timber is far above timber line; all surrounding vegetation is of dwarf and shrubby growth. At an altitude less than 1,000 feet the hills are covered with pine whose dead logs are identical with those that have lain in the bottom of Lost Lake for thousands of years.

From the embalmed mummies of the Egyptians and their sacred animals, (bulls, ibises, crocodiles, apes, fishes, etc.) we find in some cases the same varieties present

in the Nile valley and adjoining country today. In one case a flower which probably attracted a wasp was preserved with the mummy. Both are in evidence today though 4,000 years have elapsed since their death and each can be recognized as varieties still present.

I might cite other evidences of the perpetuation of species but I think my point made clear. In conclusion I would say—learn the law that governs your subject, act in accordance and success will be unbounded.

Prov. 6-6.—Go to the ant, thou sluggard; learn her ways, and be wise.

Developing Gladiolus Bloom Indoors for Fine Floral Work.

We are in receipt of a letter from Paul L. Ward, Hillsdale, Mich., offering some suggestions about the cutting of Gladioli which may prove useful to those who supply the fancy cut flower trade. Mr. Ward says:

"I have bouquets in every room in the house, but in one room where there is no heat I get the best results. In this room the light is good and the room is cool and every spike opens almost to the top before the first flower fades. To get perfect spikes for sale bouquets or funeral work I put my flowers in this room when the first flower opens and leave them there two days or even more. I always cut in the morning when dew is on. This cold room is nothing unusual. It is simply a northeast corner room in a brick house and there is no artificial heat in it. During reasonably cool weather my results are fine and better than my cool cellar which I generally depend on for best results. I attribute this to the fact that the light is better. A cool temperature together with good light but not direct sun is most suitable for developing cut flowers indoors for the best work."

The trade price list of John Lewis Childs, Flowerfield, L. I., for the year 1915 has been received. In addition to the standard varieties the special new introductions are listed and the price list illustrates many of the finest varieties in commerce. In addition to Gladioli several of the last pages of the price list show illustrations and descriptions of miscellaneous bulbs, Cannas, Dahlias, Lilies and Irises. The back cover page has an extraordinarily fine illustration of Gladiolus *America* which was introduced to the trade by John Lewis Childs.

Jane Dieulafoy.

Jane Dieulafoy, the French beauty, has been known in America for ten years, having originated about twenty years ago in the gardens of V. Lemoine & Son, Nancy, France. It is now coming into greater prominence on account of the growing interest in Gladioli generally for it has a decided character and is one of the handsomest of the Lemoine section, built up from the well known *Gandavensis* in combination with the Cape species *Purpureo-auratus*. The wild *Purpureo-auratus* is a yellowish sort, the flowers small, about two inches across, but carrying strong maroon blotches on the lower petals, a characteristic that, with slight modifications, is stamped on all its progeny. Its strong constitution and wiry 3 to 4 foot stems is inherited by *Jane Dieulafoy* whose color is cream as a base with brilliant, clean cut, large purplish-crimson blotches, edged with sulphur-yellow shadings. The individual flowers are good size and petals inclined to be wavy.

Jane Dieulafoy classes with the early or July bloomers. It does well under very ordinary conditions but responds splendidly to a little extra care by giving the grower larger flowers and more side spikes. It gives off a good number of cornels but not too many to weaken the parent corm. It lives, over winter, out of doors in the milder climates. On account of its vigorous constitution and strength of color, it becomes a fine variety to use in hybridization.

December ends the first year of THE MODERN GLADIOLUS GROWER and completes Volume I. There are a large number of expiring subscriptions this month for the reason that new subscribers in many cases requested that their subscriptions be dated back to the first issue. If you have not already renewed your subscription as per notice by postcard, you should do so at once to avoid missing the January issue as all subscriptions will be stopped promptly unless renewed. New subscribers can secure a complete file of Volume I on three year subscription orders. Bound Volume I will be ready soon, the price being \$1.00 postpaid.

Perkins-King Co., West Mentor, Ohio, have ready their wholesale price list of the varieties *America*, *Niagara* and *Panama*. These include prices on small planting sizes as well as on the larger bulbs. The price list is printed in colors and shows an illustration of both *Panama* and *Niagara*.

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Vol. I.

December 1914

No. 12

The Standing of an Amateur.

Is he an amateur? Probably no subject has caused more heated arguments among the lovers of the great outdoors, and the answer all seems to hinge upon the almighty dollar.

Standing—professional or amateur has for years engaged the minds of athletes. It has been bitterly argued by livestock fanciers and now the garden and hothouse is the seat of war.

The particular question up at the present time is—who is a professional, and who an amateur Gladiolus grower? Must a lover of these beautiful flowers give away or destroy his surplus bulbs, bulb-lets or seedlings or else brand himself as a professional?

If you owned a litter of fine setter pups and your neighbor greatly desired one, would you be a professional dog raiser if you gave him the pick of the litter for a stipulation? No.

If a lady had a reputation for making some delicious condiment or jelly, and sold a few jars to a friend, would she be classed with Heinz and his "57 varieties"? No.

Am I a professional if a man seeing my *Europa* desires a few bulbs, and, like any gentleman, not wishing something for nothing, tells me to name my own price, and I take his money? I am assuredly

not a professional, nor are any of the group of men and women who, despite an occasional sale of bulbs to some friend or acquaintance, spend many, many times the proceeds of their sales to perfect the Gladiolus.

I have no sign over my gardens proclaiming that I am a grower of Gladioli. I do not advertise my bulbs for sale nor have I a stall in the flower market. The chief outlets for my cuttings are hospitals and the houses of my neighbors who are delighted to receive them. My pay is their unstinted sincere praise of the flowers themselves, and, many times their enrollment in the ranks of amateur Gladiolus growers.

Have not our labors as amateurs, performed without thought or desire of profit, save that which comes from gazing at a bed of our beauties in full bloom, been of great financial benefit to all professionals?

The amateurs of this country have made it possible for the professionals to get greater varieties—perfect species at a most reasonable price, through having acclimated the imported varieties.

The amateurs by the influence of their gardens and exhibits have engendered a taste for the Gladiolus among the public who turns to the professional for cut flowers and bulbs.

Thus, the amateurs have advertised the Gladiolus at large expense for the benefit of the professional. Then, *why* cannot an amateur sell a few bulbs now and then, when these self-same bulbs are in the long run a benefit to the professional, as is clearly shown in the foregoing paragraphs, without being disqualified to exhibit his product in the amateur class at flower shows?

Amateurs in all lines have been the ones to inaugurate improvements—encouraging the public to join with them in their enthusiasm, and the public, properly enthused, has created a demand that warranted the professional in depending upon the public for a living. The amateur creates the demand in the public—the professional supplies that demand.

Therefore, let us not split hairs if an amateur Gladiolus grower sells a few bulbs.

CHAS. F. FAIRBANKS.

One of our subscribers in sending in his renewal for three years, volunteers the suggestion that advertisers should give prices in their advertising. He says: "Who wants to be eternally heeding the advice, 'send for our price list'?" We print this suggestion believing that it is a useful one and that all advertisers should quote prices where they have anything special to offer.

Get a Typewriter.

An amateur Gladiolus grower who is, by the way, a business man, in writing us about another matter, states that he formerly bought bulbs from people who used a pen for writing letters, and that it would sometimes take him half a day to find out what the grower was trying to say. This is a valuable suggestion to growers who do not possess a typewriter. Machines are now so reasonable in cost that every grower who is expecting to do business with the general public should possess one. It is not necessary that a stenographer should be employed, as anyone can learn to operate a typewriting

machine in a very short time. It will come a little slow at first, but the knack is soon acquired and then there is no guess-work about what you are trying to say to your prospective customer.

The Status of the Amateur.

One of the members of the Gladiolus Society has suggested the following formula by which to define the exhibitor who shall be permitted to enter in the amateur class at the exhibitions held under the auspices of the Society:

"No grower who in any manner, even the slightest, announces that he will sell Gladiolus bulbs or blooms shall be considered eligible to the privileges of an amateur.

"When making application for space at an exhibition of this Society, intending exhibitors shall state in writing whether they are entitled to entry in the amateur class, and such statement shall be accepted by the committee in charge of the exhibition. Should it be determined later that an exhibitor has made an incorrect statement of his class, any prize that he may have gained may be withheld and he may be expelled from the society by vote of the Executive Committee."

Would the members of the American Gladiolus Society approve of such a rule?

MONTAGUE CHAMBERLAIN.

One of the best and cheapest ways to start growing Gladioli is to grow them from bulblets which may be had cheaply. A little bloom will be had the first year, and the best will not be had until the second or third year, but then there is the great advantage of having strong young bulbs when they do bloom. In purchasing first size bulbs there is always the risk of getting old and worn out stock which is of very questionable value. Just try growing from bulblets. It is worth the experiment.

Bidwell & Fobes, Kinsman, Ohio, have sent out their wholesale list for November 1914. This covers prices by the hundred and thousand on the seventeen varieties of which this firm makes a specialty. *Panama* and *Niagara* head the list.

MRS. AUSTIN'S TALKS FOR AMATEURS.

NO. 11.—IS GLADIOLUS GROWING A SUCCESS?

The Gladiolus can be grown as easily as the potato and at a profit of from several hundred to several thousand dollars per acre.

The above statement is the substance of a number of articles that have appeared in different journals, magazines and farm papers in the last few years since the new type of Gladioli was sent out by the hybridists, and has influenced many amateurs to take up the cultivation of this flower for commercial purposes.

The farmer that is getting a little on the shady side of life reads this with great interest. He has always grown things but never at such a profit. He knows what it means to earn a living by "the sweat of his brow," and first thinks there must be a hitch about it somewhere, but it's right here in his own farm paper which, for many years, has given him much practical and profitable advice.

He reads that it is one of the flowers least troubled with insect pests, and memory takes him back to the potato patch of his childhood days, and how when the now old-fashioned long striped potato bugs (for there seems to be fashions in bugs as well as everything else) were so thick they promised complete destruction of the crop, that father told the boys to bring the sheep from the pasture and drive them up and down the rows to frighten and kill the bugs. It seems that although the bugs did not always drop dead from fright, that their aptitude at appearing to, or playing possum, as the boys called it, caused many to be trampled and destroyed. Of course that was fun all right, but being a 20th century farmer he doesn't care for that sort of intensive cultivation. Later when the Colorado beetle appeared he remembers nailing a shortened broom handle to a tin pan, and gently persuading the new invaders to drop into the pan, and that on the half painful reward of several hours' labor, he poured a little kerosene and finished them with a bonfire. Even now with insecticides and modern sprayers it is a fight for the crop, and he knows that successful potato growing requires skill and labor, that it is not as easy as it looks, and probably growing flowers would require a good amount of work.

But here is another thing: "The cut spikes may be sold at a good profit." Well, now, who ever heard of ever getting

any money from posies on spuds! He cautiously broaches the subject to his wife—for it is best to include wife in *new* and *untried* ventures—"Mary, maybe we'd better plant a part of our potato lot to some of them newfangled glallyolies, the're something like them red ones mother used to have. *We* can sell the tops and roots, too, and get enough off a garden patch to buy a fifty acre farm; we'll plant a few rows, and next spring we'll buy an auttymobile and ride around some."

The high school girl reads in her floral magazine: The Gladiolus can be grown as easily as the potato, and at a profit of several hundred to several thousand dollars per acre.

Surely that is not hard, potatoes are so common, it is just nothing to grow them. Why, you just plant them and they grow, and only a fraction of an acre would pay at least one year in college, and O, joy, the delicate colors, the very ones I love best, are the best sellers. Gladiolus growing sounds nice, too.

The young lawyer had never really thought of growing potatoes but, he muses, it has always looked easy enough, and if Gladioli can be grown as easily—cases with fat pocketbooks back of them are not coming in very fast, and—they must sell well, for that bunch of pink ones with the dark blotch cost all of one good fee—but how pleased she was—and the vision of a sweet face was followed by a sigh at the thought of the long wait for the little house, unless he can strike something rich soon—perhaps *this* is the opportunity.

The middle-aged dressmaker with nerves worn to a frazzle, and her physician's command: "More time out of doors or a sanitarium, Madam," clutches at the prospect as a drowning man at straws.

The retired minister finds time hanging heavily on his hands, constant reading becomes monotonous, and exercise in open air is beneficial. This Gladiolus growing looks interesting.

And traveling salesmen galore, for isn't it just what we've been looking for all these years—something of our own to sell and live at home. *Sure*, we can sell them, and the growing them is nothing, just like potatoes you know.

Thus the modern Gladiolus is dotting the earth with beauty. And is it easy and interesting, and does it pay? What has been the experience of our amateurs, and what is the real practical labor of Gladiolus growing? We pause in retrospection.

Have we not plowed and harrowed and

harrowed again, and smoothed the plot and marked the drills, and planted and cultivated and weeded and walked up and down the long rows in hot afternoons, showing their beauty to interested flower lovers, or carefully cutting the blooms, and bunching and packing them for shipment?

Then the harvesting, first digging the bulblets and seedlings we are growing for stock and have in small quantities only, which must be labeled and kept in separate trays or packages. Many of these are very choice and it was necessary to get down on our knees in close contact with mother earth to save each separate bulblet if possible.

Then the most tedious of all, comes the rooting and sorting, all of which must be carefully done for critical buyers. Most of the roots on the small sizes were taken off by rubbing the bulbs over wire sorters, care being taken not to rub too hard and bruise the bulbs. It is dusty, disagreeable work.

But this is not all, for after the roots are off, the bulbs are sorted. Not into two sizes as potatoes are, but into seven sizes, each size to be counted or estimated and labeled.

Yes, we did all those things, but so interested were we that we forgot to be tired, and we have yet to meet an amateur who is not as full of enthusiasm as ever, for Gladiolus growing gets into the blood, and you can't get it out.

The selling season is now at hand and from now on until planting time we receive and answer inquiries in regard to prices, varieties, the advisability of growing Gladioli, etc., and incidentally making many pleasant acquaintances.

Truly the growing of Gladioli has been a great success for a new beauty and a new interest has been brought into many lives. Where we once gave only an admiring glance, we now notice the glistening lustre of the petals, the beautiful form and aristocratic poise of the bloom, and we are more interested in other flowers as well, because the Gladiolus has first captivated us. The life out-doors has brought health and added strength, which is a valuable asset.

In taking up the study of any one thing that will make life more beautiful we find it a stepping stone to greater pleasure and happiness in store for us, if we place ourselves in a position to receive it.

The June 1st summing up will disclose the fact whether it has paid financially, and we believe it will, for the improved Gladiolus is even yet comparatively un-

known and the demand is constantly increasing.

Much has been said of the lack of flowers in American homes as compared with other countries, and we believe it is the mission of the new Gladioli to fill this need. Their certainty to bloom, variety of coloring and low price placing them within the reach of all.

Looking at Gladiolus growing from a serious standpoint it is difficult for one person to advise another as to whether they should undertake it or not. It is, however, easy to advise any one to go slowly to start with. Gladiolus growing like everything else needs study and experience, and it is not as easy as it looks. Grow Gladioli first as an amateur and in a small way and without making much of an investment in it or severing your connection with another occupation and depending on it for a livelihood.

MRS. A. H. AUSTIN.

American Gladiolus Society.

Public notice is hereby given that the application of Munsell & Harvey, Ashtabula, Ohio, for the registration of *Hazel Harvey*, and of B. Hammond Tracy for the variety *Maize*, is approved by the Committee on Nomenclature of the American Gladiolus Society.

Hazel Harvey—Bloom, medium large, tube curved, stout, long. Segments unequal, connivent; the upper horizontal and broad, the lower reflexed and narrower. Stamen filaments reddish. Anthers violet. Color carmine-red, throat amber-white, pencilled carmine-purple. A good, compact bloom of good, clear color and good substance. Mid-to-medium-late season. Spike tall, erect and a free bloomer on both main stem and branches. A vigorous grower and well furnished with broad leaves. Corms, medium large, "increases by division." Cormels prolific.

Maize—Bloom, medium size, tube curved, stout, short. Segments nearly equal, connivent; upper horizontal, the lower nearly straight. Stamen filaments white. Anthers lavender. Color, amber-yellow with a well defined, dull crimson blotch on the lower lip. Season, early to mid-season. Spike, medium tall, very erect and branched. Growth vigorous and broad foliage. Corms, medium size. Cormels, large and prolific. This variety was discovered by Umpleby and introduced by Tracy.

A. C. BEAL, Chairman.

At the present low prices for Gladiolus bulbs there should be double the planting in 1915 that there was in 1914.

WAYSIDE RAMBLINGS.

QUESTIONABLE SUCCESS IN GROWING SEED- LINGS.

TO THE EDITOR:—

Perhaps it might interest some of your readers to hear about my luck in raising seedlings. I had no 20 or 30 in. spikes the first season, though.

In spring 1912 I bought several thousand seeds advertised by a French grower and sold through an agent in New York state. They came up and were nursed through the dry spell of May and June. I had 2,000 at harvest time. As they were, some of them, about ready to bloom "The Freeze" of Sept. 14, 1913 took them. "Long tailed" mice took a liberal toll that winter. They made many little bulblets. This year they have bloomed plentifully. I was more than surprised, I was astonished. I send you some blooms under separate cover and you can give your readers your candid opinion. Would say that 90% are alike and fully equal to sample, other 10% are variously colored but fully equal in size. I calculate I have a stock of 3,000 or 4,000 not counting this year's bulblets. As a grower of seedlings I count myself a success.

H. M. DUNNING.

(Note by the Editor.)

Mr. Dunning has certainly had success in the raising of seedlings, but the simple growing of seedlings is not a success by any means unless the seedlings produce varieties of some value and interest. The flowers sent by Mr. Dunning are very small and inferior of the old Lemoine type and with no value commercially, practically or in any other way. We suspicion that there is a note of irony running through Mr. Dunning's communication which would not be apparent without having seen the flowers.

Those who desire to grow seedlings should, as a general suggestion, secure seed from a hybridizer and not from foreign sources. There is so much difference in Gladiolus seed that caution should be used in purchasing and it should be secured either where the hybridizing is done by hand or where varieties are grown known to be commercially valuable as chance crosses in such a case sometimes yield surprising results. The Editor has had complete satisfaction from the growing of seedlings, and although many of them are altogether worthless, yet the percentage of good and useful specimens is rather high.

PINK BEAUTY AND HALLEY FOR FORCING.

In the October issue I read an article on "Forcing Gladioli" by Mr. W. W. Wilmore, Jr. The article is quite interesting in general and particularly for every florist who has an opportunity to force them, but does not know how to handle them and the varieties suitable for the purpose. I am sure that with the knowledge of Mr. Wilmore, Gladiolus flowers could be had now the whole year round like Lily of the Valley; this would, without doubt, enlarge the trade in our particular flower, and would result in better profit for the growers and the florists as well.

In one thing I do not agree with Mr. Wilmore. He says "The following varieties are very good, but on account of their prices it will be some time before they are used for forcing in quantity." In the list of 10 varieties he mentioned *Pink Beauty* and *Halley* as too expensive, but the quantities here in Holland allow us to sell *Pink Beauty* and *Halley* as cheap and cheaper than the first twelve varieties recommended for forcing. I do not use THE MODERN GLADIOLUS GROWER for an advertisement in this article for myself, as every seedsman and large buyers of Gladiolus bulbs in America who receive catalogues from Gladiolus specialists, know that *Pink Beauty* and *Halley* are offered at low prices. This is not the result of the War, but because both varieties are large multipliers and strong growers. *Pink Beauty* is already known in America as a good money-maker for early forcing.

P. Vos Mz, Holland.

THE \$1,000 GLADIOLUS BULB.

The question as to the possibility of a \$1,000 Gladiolus bulb seems to be viewed mostly from the standpoint of whether the possessor or purchaser could make it bring him in that much profit in excess of what an ordinary bulb would bring. That is not correct for the value of a bulb does not depend on what its owner can make out of it in profits, but on what its qualities make its existence worth to all the people interested in it and its progeny. What its owner can make out of it may depend wholly upon his business ability, or even on his ability to cheat.

Take the bulb *America* for instance, as compared with an inferior bulb. The cost of any bulb may be said, for purposes of this argument, to be \$10 per thousand, really less, as a good profit can be made by growing bulbs at that price. Time was when *America* wholesaled at \$50 per 1,000; and I venture to say that, one season at least, when the price was that

high, there were 100,000 of the bulbs on the market, to say nothing of the reserved planting stock. That would make the market value of those bulbs \$5,000, while the market cost of an inferior stock of the same size would be \$1,000, leaving an excess of value accruing to the original *America* bulb of \$4,000 in only one season's crop. If a valuation could be made of the market sales of all the progeny of the original *America* bulb, I think \$1,000 would look like an extremely insignificant figure.

The higher price received for the market blooms would to some extent be a factor in a complete estimate of the value of the bulb, though this would be to some extent covered by the higher price paid for the bulb.

The higher enjoyment received from the choicer flowers is also an item to be considered, and not wholly covered by the higher price paid.

I wish someone familiar with the trade in Gladiolus bulbs since *America* originated would make an estimate of the number sold at wholesale each year since its introduction, and from the price each year, figure up the total of wholesale sales to date, then deduct an amount representing one cent per bulb; and then we will get an idea of what the first *America* bulb was worth, judged by the price people were willing to pay for its progeny on the wholesale market.

B. C. AUTEN.

SCANTY SEED SUPPLY FROM GLADIOLUS CROSSING.

TO THE EDITOR:—

There appeared in Bulletin No. 4 of the American Gladiolus Society and reprinted in July issue of THE MODERN GLADIOLUS GROWER an article with the caption, "Gladiolus Nanus," by Maurice Fuld. Said article closes with the following paragraph:

"Where are our American Breeders that they cannot recognize the wonderful possibilities by breeding Nanus with Childs', etc.? Forcing Gladioli today is a mighty important commercial factor and I do not believe that I exaggerate when I state that at least a million bulbs of Gladiolus *America* alone are used for this purpose. I have great confidence in our American breeders believing them superior to all the European, but I will admit they are slow at times in grasping opportunities."

The writer is willing to grasp opportunities and something a little out of the ordinary appeals to him. However, in crossing the large flowered types and Nanus varieties, results have been far from satisfactory. *America* X *Peach Blossom* and *Peach Blossom* X *America* (these

are only given as examples as we have made many other crosses) have produced practically no seed for us. Have spent a lot of time in this work, having the large flowered varieties bloom under glass at the same time the Nanus varieties come into bloom. Will men of wider experience, like Professor Van Fleet, Mr. Fuld, Mr. Wilmore or any others, have the kindness to unfold any method whereby reasonable success in producing seed that will grow, might be attained?

JOE COLEMAN.

SMALL BULBS VS. LARGE BULBLETS.

A thrifty grower on the other side the big pond filled an order for small bulbs with large bulblets and when the buyer protested the shipper tried to convince him that large bulblets are just as valuable as bulbs of the same size. Last spring I planted one hundred *Peace* bulblets $\frac{1}{2}$ inch in diameter, and an equal number of half-inch bulbs. The latter were far ahead of the bulblets during the summer and much to my surprise produced seventy-five fine salable spikes of flowers. After digging I find the bulbs average about one inch to one and a quarter, and a few larger. From the hundred bulblets I got ninety-four bulbs and twenty salable spikes not quite as good as the others and the bulbs after digging average a full size smaller, from three-quarters of an inch up.

From this I conclude that big bulblets are more valuable than small ones, as a much larger percentage grow and produce larger bulbs, but they are *not* equal in value to year-old bulbs of the same size.

S. E. SPENCER.

GROWING GLADIOLI FROM SEED.

I have quite a few bulblets from crosses I made last summer, some of which bloomed this year. I planted them May 4th, from that time till August 11th, they just grew and grew. I picked the first bloom from these August 11th, and the last September 4th. One of these seedlings that did not bloom made up by raising a family of 96 tiny bulblets, the bulb itself being about $1\frac{1}{2}$ inches in diameter.

JESSIE CLEVELAND.

If your subscription ends with the December issue you should renew promptly so as to avoid missing any of the numbers as the post office regulations make it necessary that we discontinue sending promptly at the end of the period.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Gladiolus Trimaculatus.

TO THE EDITOR:—

Can you give me any information about the *Gladiolus Trimaculatus*? I have never seen it mentioned by anyone except G. W. Park. He says it is spotted and new, one of his French hybrids. C. J.

Answer:—*Gladiolus Trimaculatus* is a species which was brought into cultivation in the year 1794. It is a small growing variety attaining a height of only about 12 inches. The color is red and white and it blooms in June.

Storing Bulblets in Small Quantities.

TO THE EDITOR:—

I have had a good deal of trouble in storing bulblets so as to have a reasonable proportion grow when planted in the spring. Is there any special way of packing them for storage or other method of handling which gives superior results? Detailed instructions would be very gratefully received.

M. C.

Answer:—Answering your query about keeping bulblets would say that I have no special way. I keep them in paper bags, or the ones of which I have few, in small paper envelopes. They dry up of course but I have had no difficulty with their germinating in the spring as I always soak or peel them. Choice varieties are peeled carefully—I mean where the number is very limited—and the others are soaked a day or so before planting. Planting early overcomes the trouble a great deal as the ground has more moisture in it in the spring. I have never lost but one lot. Last year I picked out a somewhat shady place for some of them, thinking the shade would keep the ground moist and they would germinate better. They did very well except *Mephistopheles* of which out of several hundred all but half a dozen rotted. I find that many dry up and shrink away some from the shell. Those that do this are easily cracked by pinching a little so that by all these methods as seems best in each case, I get a large percentage of germination. I have thought that the methods of keep-

ing damp, etc., as recommended by Mr. Kunderd were all right for large quantities, but for the growers of many varieties, a few of each kind, it would be hardly practicable. I buy a box of small manila envelopes and a quantity of quarter pound paper bags. In digging named varieties, I dig up the bulb and drop it, with the bulblets, into a paper bag, at the same time dropping in the label which has marked it during the season. These are all packed away in such shape that they will cure right in the bags and later on as I have time I go over them, trimming the bulb and marking it, and putting the bulblets into an envelope and marking that. It so happens that I often have several bulbs of the same kind planted in different places so after all the above work is done, I sort out the envelopes, alphabetically, and combine where there is more than one. In this way I bring the stock all together again for planting. This may be a roundabout way but it answers my purpose, enables me to do much of the work during the winter months, and by its plan I have been able to keep my varieties isolated perfectly and for this reason I consider my stock a valuable one.

F. S. MORTON.

Questions on Pollenizing.

TO THE EDITOR:—

1. Is the habit of specially protecting the newly pollenized flower a common one, or do most breeders simply take a chance, trusting that they have forestalled any further fertilization?

2. What is the result of fertilizing the flower with its own pollen?

3. The Gladioli are all of the compound character, both staminate and pistillate, are they not? If a variety is bred for seed, and one has only one bulb, will the crossing of the different flowerlets on the same stem be of more value than simply fertilizing individual flowers within themselves?

C. H. F.

Answer:—1. When specific results are sought would advise protecting with sack or otherwise.

2. It is inadvisable to self cross a flower except for experimental work.

3. They are. Would not self fertilize, but crossing flowers with pollen from the others on same plant will bring good results. It merely tends towards fixing the type, or largely follows the type. In some crosses rightly followed it brings good results, but where two bulbs of the same sort are crossed results will be better. I do not advise self breeding except for experimental work. With the great mass of types and sorts we can find material to breed for extra results without following close lines.

C. BETSCHER.

Forcing Same Gladiolus Bulbs the Second Year.

[From the Florists' Exchange.]

I would like to inquire through the medium of your Question Box the proper way to handle my *America* Gladiolus, which I am forcing in my greenhouse benches, so that I could use the bulbs (corms) again. If it were possible to force these same bulbs another year, I should be pleased to know the best way to handle them now for that purpose.

E. W. K., Pa.

Answer:—If you cut the spikes of blooms of *America* Gladiolus which you are forcing in your greenhouses with all or nearly all the foliage attached, so that they may bring the highest prices in the wholesale market, the bulbs will be practically worthless for further use, and it will be better to throw these away after the flowers are cut and buy new bulbs for forcing next season. Again, even if you cut the flowers in such a way as to leave much of the foliage growing on the plant, it is not likely that the bulbs would in many cases produce new ones in the Summer season in a greenhouse bench, nor could you afford to wait for these to mature in the bench, as you would need it for use in planting some other crop. If you were growing them in the field, it would be different, but even in that case you would be obliged to cut the flower stalks so as to leave considerable of the foliage on the bulb in order that it might form a new bulb.

Wood Ashes as Fertilizer for Gladioli.

TO THE EDITOR:—

What is your opinion as to the value of good wood ashes as a fertilizer for Gladioli? About how much should we apply per acre? M. S. P.

Answer:—The writer has used wood ashes obtained from a lime kiln for several years and with good results. These lime kiln ashes contain perhaps one-third lime in addition to the regular proportion of lime which wood ashes always

carry, and therefore are less valuable for their potash and phosphoric acid, figured by the ton, but still they are very useful, especially as considerable quantities of fresh manure was used with them, and the lime tends to correct the acidity.

The quantity of ashes to use per acre depends on the previous condition of the soil and how it is being handled, but the writer is a believer in cautious use of chemical fertilizers, in which class wood ashes would come. One thousand pounds per acre should be sufficient if ashes have not been used before, and this quantity might be used two or three years in succession, after which half the quantity or even less might be used for another two or three years. Definite instructions cannot be given for the reasons stated. Wood ashes are perhaps the best balanced fertilizer that can be used for Gladioli, but they cannot be depended upon without an adequate supply of humus. The humus can be supplied in the form of rotted stable manure, but the writer has used fresh stable manure applied in the fall of the year without suffering any bad results.

MADISON COOPER.

For spring planting the Gladiolus is one of the most beautiful of summer bulbs. They are perfectly hardy in the South, but it is better to lift them in the fall, for the new bulbs or corms form on top the old one, which perishes, and they should be separated from the old bulb or corm, and the little offsets which form under the bulbs should be taken off and the next spring sown like seed to make new bulbs. There are many colors, from white, yellow, scarlet, crimson to purple and almost blue. One of the finest is the variety called *America*, which makes large spikes of pale, flesh-colored flowers. *Niagara* is nearly white with some streaks of red. *Sulphur King* is golden yellow, *Princeps* is very large crimson, *Blue Jay* is a purplish or nearly navy blue. Then there are many sold of a general mixture of colors, which are sold lower in price than the named varieties. The bulbs are kept in winter in a cool, dry place and planted in March, April and May for a succession of blooms.—PROF. W. F. MASSEY in the *Progressive Farmer*.

Following the big flower show which was held by the Syracuse, N. Y., florists during November, the Syracuse Florists' Club was formed and Henry Youell, well known to the Gladiolus trade, was elected president. The enterprise displayed by Syracuse florists in forming an organization should be emulated in other places.

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THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.
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Vol. II.

JANUARY, 1915

No. 1



GLADIOLUS—INDEPENDENCE.
(For description see pages 5 and 6.)

The Gladiolus.

PAPER BY MR. E. T. WHEADON.

In Guernsey Growers' Association Year Book, 1914.

WHEN I was asked to prepare a paper I acceded to the request readily enough as I thought that I knew something about Gladioli, but when I put pen to paper I found that the subject was more difficult than I had anticipated. Of course, I have worked amongst them for a good many years, but the knowledge that has come to me in this way is not very easily put into words, and when I looked up what books I could find, I was surprised at how little there has been written on this subject apart from trade material, in which the writer's main object has been to boom some particular varieties or strains in which he was interested. What little I was able to find dealt almost entirely with the late flowering sections. I have been able to find hardly any literature at all dealing with the Nanus or Early Flowering Section which is so closely associated with this Island.

The name *Gladiolus* is diminutive of *Gladius*, a sword. This refers to the shape of the leaves; it used to be called the Corn Flag, and belongs to the natural order *Iridaceæ* or *Iris* family.

History—There is an old legend quoted in Greek Mythology which accounts for its origin in this way. Hyacinthus was an attractive Laconian lad, much loved by Apollo and Zephyr. He preferred the Sun to the Wind and caused in the breast of the Wind a feeling of jealousy and a desire for revenge. When playing a game of quoits with Apollo, the Sun god whirled a quoit through the air. Zephyr treacherously blew it from its course, so that it struck Hyacinthus upon the head and killed him. Apollo as a memorial for his friend caused the *Gladiolus* to spring from Hyacinthus' blood.

While we are not able to trace the *Gladiolus* back to the antiquity suggested by this legend, a number of species have been known and recognized by botanists for several hundreds of years. *G. Communis* was known as far back as 1575, Byssantinus in 1629, while Blandus and Tristis were known in the 18th century. Tristis came from Natal, while the others are of European origin. Species have been found in the Mediterranean region and West Asia, but undoubtedly the headquarters of the genus is South Africa, from whence quite recently *G. Primulinus* was brought, it having been found in the

Zambesi region. According to some authorities 150 species are known. M. Souchet, the gardener to Napoleon III, brought the tall *Gladiolus* into prominence, and since then the progress in its culture and development has been remarkable. The interest of Queen Victoria in the flower, as she saw it in Napoleon's garden, popularized it for English culture, and horticulturists and hybridizers in other countries were quick to see and appreciate its possibilities.

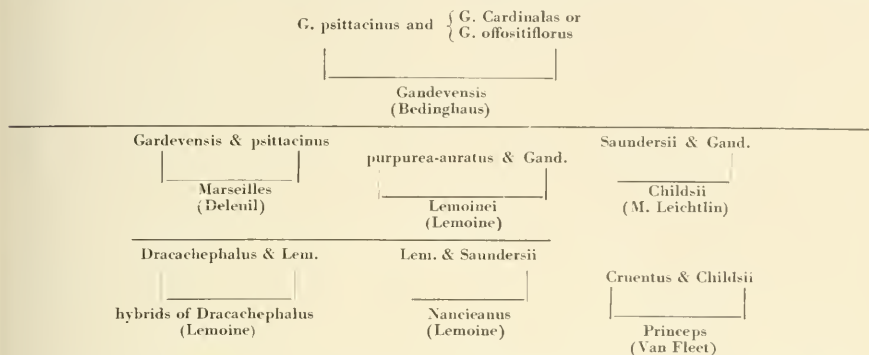
In England the name of Kelways will always be associated with its development; in France, Lemoine and Vilmorin, in Germany, Max Leitchlin were pioneers in this work.

The first development of note was the introduction of *Gandensis* (*Glaieul de Gand*), or *Gladiolus* of Ghent, from which all the later improvements in the tall Glads have come, was obtained by M. Bedinghaus, gardener at the Castle of Arenberg in 1837. As soon as Louis van Houtte, the celebrated Ghent horticulturist, heard of Bedinghaus' success he purchased the novelty and gave it the name of *Gladiolus Gandensis*. "I have just acquired the exclusive property of this *Gladiolus*," said he in his Catalogue for 1841, "excepting two bulbs which are in the possession of another Belgian nurseryman. Everyone is coming to see it whilst I am writing these lines, for in its habit and colour it leaves far behind everything known among Gladioli. Its size surpasses that of *G. Ramosus*; its majestic corollas, seventeen to twenty in number, are of the brightest vermillion, their lower petals adorned with chrome yellow, amaranth red, and pistachia, are, besides, beautified through the sky-blue anthers which decorate the centre of the flower."

When the reader of this pompous description has before his eyes the coloured plate which Van Houtte published in his "Flore des Serres et des Jardins de l'Europe" for 1846, he may find some difficulty to understand how such a flower could suggest such enthusiastic ideas. In fact, since 1841, nurserymen have worked diligently, and the gorgeous things we are now accustomed to see exhibited by the lucky raisers of Gladioli cause us to lose sight of the first origin whence they have arisen. This race is remarkable for its vigour, the flowers are well formed and are generally well distributed along

the stem; a large number open at the same time and produce a good, though perhaps a rather stiff effect; there is a fine range of colour from nearly pure white as in the old *Snow White*, to deepest crimson, with pinks and salmons, and also faint yellows.

P. L. de Vilmorin, in "Revue Horticole," 1904, gives the following pedigree of the *Gladiolus* family.



Lemoinei first distributed in 1875 by their raiser M. Lemoine of Nancy, are remarkable for the large blotch on their lower petals which is their most distinguishing feature, their stems are not as stout as *Gandavensis* and tend to be crooked; they usually only open two or three flowers at a time. They have a considerable range of colouring. Lemoine had another and a greater success when in 1883 he introduced *Nancieanus*, with flowers of much larger size than any produced up to then, some measuring as much as six inches in diameter. These in their more recent development have been freely crossed with *Gandavensis* and have gained in vigour thereby.

Lemoine's new blues were first exhibited at the Chicago Exhibition in 1893 and placed on sale the following year. These so-called Blues are a break of great importance and were the result of crossing with *G. papilio*, a pale lilac species blotched and overlaid with dull red. In many of the progeny the primitive colours have separated, resulting in an attractive series of rich purple and heliotrope blues, quite new to the genus. True bright blues quite free from red and purple tones, have not yet been obtained, but the blue kinds, the issue of *Papilio* and Lemoine crosses, are unique and desirable acquisitions. Very fine examples of these have been exhibited at our Summer Shows by Messrs. W. Mauger and Sons, who have a splendid collection of the late varieties.

G. Primulinus, the primrose-coloured species imported from the Zambesi region, has been much used by hybridizers recently and in 1909 hybrids with *primulinus* blood were first offered. This gives promise of adding a very valuable yellow section.

M. Leichtlin, of Baden Baden, Germany, raised a new race by crossing the best *Gandavensis* Vars with *Saundersii*. These

were sold to America and distributed as *Childsii*. At their introduction they appeared to be a great advance, but there has not been as much improvement in these as in some of the others, and it is doubtful whether they will maintain their distinct position. In fact, it is becoming more and more difficult to keep up any sort of distinction between these several sections, and in all probability any attempt to do so will be given up before very long.

Princeps, a more recent introduction, is a flower of marked characteristics, but does not seem to be able to produce any seedlings of value, and though its flowers are of immense size and perfect colouring—its habit is dwarf, few flowers develop together, and its value is not as great as was at first supposed.

CULTURE.

The late *Gladiolus* is not particular as regards soil, but prefers a fairly light, warm soil, well drained. The ground should be deeply worked and no fresh stable manure used. Plant about five to six inches deep, giving about six inches between the bulbs. Planting may be done at any time between February 1st and April 1st, or if very late flowers are required a batch may be put in as late as the middle of May, in which case it is well to keep back some of the biggest bulbs for this purpose. As regards manuring, well decayed stable manure worked in some time before planting, or a

fair dressing of Bone Meal at planting time and a top dressing of a chemical manure containing a fair proportion of Potash will give the bulbs all they need. Mulch with strawy manure or chopped straw to keep the surface fresh, and if necessary, water; in which case give plenty of water while you are about it. A gardener who has lived most of his time in the West of Scotland, where their rainfall is 50 per cent. higher than ours, tells me that he can do these Glads very well there, and he puts down his success in large measure to the heavy rainfall. This advice about watering only applies when growing in light well-drained soil. Mr. Burrell, of Cambridge, lecturing before the R. H. S. in 1896, says that he grows in very stiff clayey soil and that he succeeds well without either watering or mulching, though the rainfall in his district is only 18 inches. He strongly deprecates using any manure either before or after planting, recommending rather that the Gladiolus should be planted in soil that has been well manured for the previous crop. Most Gladiolus growers whom I have consulted agree with me that the Gladiolus likes both manure and water, provided both are applied in the right way.

The trouble with the late flowering varieties is that the corms are inclined to deteriorate. This is the case in a great many of the choice kinds. How can we overcome this trouble? There are two possible ways: First plant the deteriorated bulbs under the best possible conditions and take out the flower spike before the blooms develop; the bulbs under this treatment should develop fully and produce a large and solid corm capable of doing good work the following year. The second and surer way of restoring a variety is by saving the bulblets and growing these on. If they are well treated a fair proportion will reach flowering size in a single year.

In choosing bulbs remember that other things being equal a bulb is valuable according to its vertical diameter. The best bulbs are obtained by planting small bulbs just too small to flower. These throw all their vitality into the new bulb, which is conical, or nearly round, the ideal shape.

The Gladiolus is now grown in immense quantities in England, Holland and America, and also in Germany and France. In America the interest taken in these late years has been very great. Cowee, Groff and Banning (the originator of *Niagara* and *Panama*) have been amongst the most successful raisers. It seems to me that too many varieties have been put on the market, the great bulk of which will

soon be discarded. Groff's strain consists of over 15,000 varieties. It includes the new blues, hybrids with *Palilio Major*. I must not forget to mention the beautiful *Langprim Hybrids* that Messrs. Kelway have been exhibiting during the past two years. These are of various shades of pale yellow, and obtained by crossing *Primulinus* with some of their own seedlings. W. Pfitzer, of Stuttgart in Germany, has introduced some remarkably good varieties; *Europa*, the nearest thing to pure white I have seen in the lates, while *Schwaben* is said to be a very good yellow. Some very remarkable prices were paid for Gladioli in Holland in 1912, one variety, *Glory of Noordwijk*, being sold for £1,666, although the stock only weighed 2 lbs. Amongst recent introductions *America* holds an easy first, as, though it has only been in commerce a comparatively short time, it is used by the million for cut flower work both indoors and out. Other varieties which promise to have great vogue are *Panama*, not unlike *America* but a deeper shade of pink, while *Halley*, a good salmon pink with creamy blotch and dark red stripes on lower petals, one of the earliest to flower, is sure to be useful. *Pink Beauty*, though in no way a remarkable flower, is being largely grown on account of its earliness, whether or no the much boomed yellows, *Golden Measure*, *Glory of Noordwijk*, *Niagara*, etc., will be found to be of much use commercially remains to be seen. I know only a few of the newer varieties, but have noted the following as being very good: *Faust*, *Annie Wigman*, *Willie Wigman*, *Golden King*, *Mrs. Francis King*, *Badenia*, (one of the best blues), and *Peace*, a pale lilac, not white as described by the introducer.

(Concluded next month.)

Bidwell & Fobes have issued their retail catalogue and price list for 1915. It is a very neat and concise booklet five by seven inches in dimensions and contains illustrations of some of the best and most prominent varieties including the Bidwell & Fobes specialties, *Panama* and *Niagara*. A brief description of each variety is contained in the catalogue and price quoted by the single bulb, by the dozen and by the hundred.

In this catalogue Bidwell & Fobes offer THE MODERN GLADIOLUS GROWER for one year to new subscribers only with every order of \$2.50.

Our columns are extremely crowded this month and if there is anything which does not appear as expected, the reader will know the reason.

MRS. AUSTIN'S TALKS FOR AMATEURS.

GLADIOLI IN THE WINDOW GARDEN.

A window garden in winter is most interesting and almost anyone can have one; for a window garden may be a spacious bay, the size of several ordinary windows, filled with expensive plants and with moisture furnished by a tiny fountain, or it may be a lonely Geranium in the kitchen window of a tiny cottage with air moisture furnished by the teakettle.

The window garden of perhaps a dozen plants is most common in ordinary homes, and this may be very beautiful having a fern or two, a few Geraniums from August cuttings, some Begonias and quite often an Amaryllis. If space is limited Maiden Hair Fern is very desirable as it requires so little room, will grow nicely without direct sunlight and always presents a cheery appearance.

Primula Obconica and Chinese are both desirable and will bloom nicely in the north window.

Although the Coleus is much more beautiful grown in sunlight, even in the short, dark days of early winter its velvety leaves show a rich soft coloring that adds brightness to the window when we cannot have much bloom from flowering plants.

Florists find the Gladiolus valuable for winter and spring blooming and are yearly forcing thousands in their greenhouses. The small early flowering varieties are very dainty and decorative, and the new large flowering types may also be grown in the living room with fair success.

This was brought forcibly to my attention several years ago, when, in early springtime I saw a few in the living room of a friend. The possessor of them said: "It seemed as if I just could not go through the long, tedious winter without anything growing in my window, and so I planted these because they were all I had, and I thought it would be something green even if they did not bloom." But they did bloom, and finely, too. She had large bulbs planted in rich soil in a good-sized tin pail. The growth was strong, the spikes thrifty and the colors very delicate. The varieties were our good old *Augusta* and *May*. There were also three or four pots, each having a large bulb not yet in bloom. The pail and pots were covered with green crepe paper and the whole effect very pretty, the expense but a trifle. One could have a dozen varieties at extremely small cost.

The room was of good size and generally a little cool near the window, which was all the better for the Gladioli as they prefer a cool temperature. For the health of the family she washed her rooms daily with fresh air and had a window lowered a few inches at the top in an adjoining room.

When plants look sick watch out for the family, for neither plants or people can be well and strong or thrive breathing impure air. A crock of water on the stove furnished the necessary air moisture.

We seldom miss having a Pleasure Pot of Gladiolus seedlings growing in our window, and feel well repaid for our trouble in the enjoyment we have watching the growth of the tiny green blades. There are many new varieties now that are quite easily forced and the bulbs are usually well cured so that they may be planted in December and January. Try a few in your window.

AT LEAST ONE RESOLUTION.

In entering this New Year let us make one special resolution pertaining to the Gladiolus, to the effect that we will be more critical in our selection of seedlings for propagation.

Have a sort of Commencement from the 1914 High School of our study of this flower into the 1915 College for the further study of and to strive for the Ideal or Perfect Flower.

With best wishes for a successful year.

MRS. A. H. AUSTIN.

Gladiolus "Independence."

This variety has never received the attention to which its grand qualities justly entitle it and the strange reason for this neglect is found in the plant's splendid fertility. It proved so prolific that it quickly became abundant and the price was lowered so rapidly that buyers supposed it was of inferior quality and passed it over without examination. As a matter of fact the flowers are very beautiful and the vigor of the plant makes it an easy one to grow in perfection.

The color of the blossoms varies from deep rosy pink to rosy scarlet but always brilliant and rich. The petals are of velvety texture and the vigor of the plant enables these petals to hold their color for a long time, making the variety especially useful as a cut flower or equally useful for massing in a garden. It is used extensively by the Boston florists for designs.

L. MERTON GAGE.

Gladiolus "Independence."

(Subject of illustration on front cover.)

(BY G. D. BLACK.)

I have been asked for a history of *Gladiolus Independence*. There is no doubt in my mind that it is one of Groff's seedlings. It has been our practice to buy and test most of the varieties and mixtures offered for sale, that we might select and propagate the best from them. In nearly all mixtures of Groff's hybrids that we have had, *Independence* was very abundant. In this way we obtained our first stock of *Independence* in 1904.

By 1907 our stock had so increased that we were able to make a very effective display of *Independence* at the Iowa State Fair. It was at this time and place that it was named *Independence* in honor of our home city. The Iowa Seed Co. gave us an order for several thousand bulbs and introduced it as a novelty on their colored plate the following season.

Probably Mr. Geo. S. Woodruff was the first *Gladiolus* specialist to segregate this variety in 1902. He named it *Gad*. *Independence* was sold largely by error for *Mrs. Francis King* after the introduction of that variety, and you may imagine Mr. Woodruff's surprise when 500 bulbs that he had purchased for *Mrs. Francis King* bloomed, and were the same as his favorite *Gad* or *Independence*.

Like many other varieties there is quite a diversity in the color descriptions of *Independence*. From a dozen descriptive price lists by *Gladiolus* specialists, I quote as follows:

Cowee—"Light scarlet."

Brown—"Large, light red."

Wilmore—"Rosy pink, shaded throat."

Stewart—"Light scarlet."

Chamberlain and Gage—"The color of the blossoms vary from deep rosy pink to orange scarlet."

Wedge—"Light red. The best shade in artificial light."

Franklin Nursery—"Light scarlet."

Tracy—"A brilliant rose pink with richly marked throat."

Woodruff—"The best light red in market. Large cherry blossoms of perfect shape, marked white and maroon in throat."

Fryer—"Light scarlet."

Coleman—"Deep pink, bordering on scarlet."

Black—"The best light red for artificial light."

The use of so many different words to describe the same color is very misleading to the average mind. In the twelve descriptions, four say it is light scarlet,

four say it is light red, and four say it is some shade of pink.

As light scarlet and rosy pink are light shades of red, why not say light red and avoid confusion? I am now looking at a blooming spike of *Independence*, and if I am not color blind the color is a combination of light scarlet and rosy pink. I do not think this can be described better than to call it light red.

Sunnyside *Gladiolus* Gardens, L. Merton Gage, Prop., Natick, Mass., have issued their retail price list for 1915. This consists of sixteen pages and gives some useful information as to care and planting. The varieties listed are all high class and Mr. Gage has in nearly every case given the originator of the varieties, which we commend as being a very desirable thing to do. It is, of course, entirely proper "to give credit where credit is due" and this is one of the best ways of doing it.

B. Hammond Tracy, of Cedar Acres, Wenham, Mass., lost his entire stock of *Gladiolus* bulbs on the morning of Nov. 23, when a fire, starting in the new storage building, spread to the old storehouse and barn, completely destroying both with their valuable contents. The bulbs had just been harvested from about thirty-five acres and Mr. Tracy estimates his loss at \$105,000; insured for \$50,000.

George S. Woodruff has issued his wholesale price list for the season of 1914-15. It contains the usual selections of choice varieties that Mr. Woodruff has made a specialty of, together with additions of some of the best new varieties and the prices are quoted on bulblets of some varieties as well as second size bulbs. In addition to the standard varieties Mr. Woodruff lists some very useful mixtures, especially adapted for florists' use.

THE MODERN GLADIOLUS GROWER aims to be helpful to both amateur and professional growers. It is, therefore, to the interest of all wholesalers to see that THE MODERN GLADIOLUS GROWER is placed in the hands of every one interested. Those who get out a catalogue cannot do better than to follow the example of Bidwell & Fobes, as mentioned in another column, and offer this magazine with orders for bulbs. Special rates will be made to growers who wish to use THE MODERN GLADIOLUS GROWER as a premium.

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
PUBLISHED MONTHLY ON THE FIRST OF THE MONTH BY
MADISON COOPER, CALCIUM, N.Y.

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Special favors to none, and a square deal to all.

Canadian and Foreign
Subscription Price
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Growers are invited to contribute articles or notes over their own signatures, but the Editor reserves the right to reject anything which in his judgment is not conducive to the general welfare of the business.

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Vol. II.

January 1915

No. 1

Fireproof Bulb Storage.

The loss sustained by Mr. B. Hammond Tracy, as reported on page 6, should draw the attention of those who grow large stocks of bulbs to the desirability, if not the actual necessity, of providing fireproof buildings in which to store them. While it is true that a fireproof building is more expensive than a non-fireproof building, yet the additional cost is small and in storing bulbs there is such a large value stored in small space that the safety secured is worth the additional first cost, and if insurance is carried to cover, the saving in insurance rate will soon pay the extra expense of construction.

Mr. Tracy's loss cannot entirely be reckoned in money as doubtless he had seedlings and specialties of unknown value which cannot be replaced, and this is also true of many other growers. Few, if any, are carrying insurance up to much over half the value of their bulbs, and if they did we imagine that it would be difficult to prove values in case of total loss.

We can perhaps speak with some authority in connection with this matter from the fact that we have a fireproof bulb storage of our own. This fireproof room is a comparatively small affair being less than ten feet square, but it is much more than ample to hold our stock of bulbs as we are not growing on a com-

mercial scale but only as an amateur. This room is constructed of hollow tile and reinforced concrete, and as the walls are 12 inches thick on the fire exposure sides, and as the door opening is protected by an inner and an outer iron covered door, there is no doubt about it being a fireproof room in fact as well as in name.

Again we suggest that those who are building new for the storage of bulbs should take advantage of modern construction and provide at least a fireproof basement for the storage of their most valuable bulbs.

MADISON COOPER.

In the December issue we approved of the idea of one of our correspondents who suggested that growers should quote prices in their advertising. It has been pointed out to us that this should apply only to retail prices and we beg to qualify the suggestion to this extent. It is, of course, impractical that a long list of varieties should be quoted and our suggestion that when growers have anything special to advertise they should quote prices is quite correct as we see it. Wholesale prices should not be quoted in a publication which goes to both the wholesale and retail trade. We refer to what Mr. Woodruff has to say on the subject in "Way-side Ramblings" department this month.

"The Standing of an Amateur."

Under this caption President Fairbanks gave us an interesting statement in the December issue of THE MODERN GLADIOLUS GROWER, and it is well that such a statement should be made. It is well that the amateur should be told very plainly that the commercial growers do not feel any antagonism toward them.

Possibly some may think that President Fairbanks has rather overstated the case in several particulars. For example, I think it will be news to some, at least, of the commercial growers, to be told that "amateurs have made it possible" for them to procure new sorts by having the imported varieties acclimated by the amateurs. Most of us have done our own acclimating. Also one paragraph seems to imply that the amateurs grow plants "for the benefit of the professionals," though possibly he did not intend to state that.

But what we have missed mostly in all of the discussion that this vexed question has produced is help toward a solution of the problem—in fact the real problem has been almost entirely ignored.

The question that is before us is: "What rule can we make that will be fair to the true amateurs and will protect them from competition with those who do not deserve to be classed as amateurs?"

We are all agreed that it would most unfortunate be, if an amateur were debarred from exhibiting in that class just because he had sold a few blooms or bulbs. But how shall we avoid that? Where will we draw the line? What rule can we make that will be fair to everybody, that will be practical, and that will avoid harmony-disturbing wrangles?

One suggestion has been made—that we permit amateurs to sell their surplus, but rule out of that class any who may advertise that they have Gladioli for sale.

I think some such rule will be found necessary, for I remember that a man who wrote me about a prize which he had won in the amateur class, wrote on

paper that bore a printed announcement that he had Gladioli for sale.

One solution of this problem has received very little attention, that is to do away with the amateur class and have all exhibits entered in the open class.

The general opinion seems to be that the commercial growers have an advantage by having a larger number of plants from which to make a selection of choice spikes.

But do they have any real advantage? Is not the very abundance of their plants a disadvantage? To produce the best spikes, requires more care and attention than can be given to a field full, and the amateurs with their small gardens have the possibility of every advantage.

What we should do is to encourage the amateur gardeners to make the most of their opportunities. How can we best do this?

MONTAGUE CHAMBERLAIN.

Do Bulblets Sport?

The above question has been asked us without any qualification and we print it hoping that experienced growers will give their impressions and actual experience in full. It is, of course, understood that some growers claim that there is no such thing as a Gladiolus sport, but yet others claim that there is. It is impossible that both should be right and we ask for the evidence. Any one having anything to say on this subject will be welcome to use the columns of THE MODERN GLADIOLUS GROWER either with their own signature attached or without as they prefer.—[THE EDITOR.]

The great European War has resulted in such a reduction in wholesale prices of Gladioli that this will doubtless operate to reduce the price materially at retail. The new prices which are now prevailing should encourage every one to plant more largely during the spring of 1915 than they have ever planted before. It would seem that better varieties at present prices should prove a good investment.

WAYSIDE RAMBLINGS.

BULBS AND TUBERS FOR PROFIT.

When I first came to southern Alabama nearly 15 years ago and started in the growing of Cosmos and Gladioli a southern florist advised me to grow yam potatoes, saying there would be more profit in them, but I have kept at my original line and although I have had ups and downs I am still following same although I have added some branches to those started with.

The past season was quite disappointing on account of the long drouth from April until late in July which badly reduced our cut of Gladiolus blooms which we were expecting to send to northern

few ourselves. Some of our seedling Cannas are becoming recognized as valuable sorts and we have about a score of new ones which are destined to be heard from. We have lent a hand in making for Stokesia cyanea, one of the most attractive native herbaceous plants, a place in the hardy gardens of two continents, and it was our eye that first discovered merit in the White variety which is now almost as well known as the Blue. We are now introducing a Lavender Pink variety, and it will be followed with Purple and Yellow varieties in the near future, all of these being our own productions.

This southern country is adapted to growing almost all kinds of bulbs and flowering plants, and as we can plant



A Field of Trinidad Dasheens in Alabama.

markets during May and June. But drouths as well as floods have a habit of visiting all sections of the country when least expected, and one has to take what comes and look ahead to the end of the rainbow of success which is always just over the hill.

We have had the satisfaction of dwelling amongst some of the wonderful beauties that the Great Creator, assisted by the hand of man, has brought forth, and at the same time, knowing that we have produced a greater value from the cultivation of a smaller area than we could have done with ordinary crops.

We are testing out from year to year many new things as well as producing a

Gladioli in February, we can have blooms on the market in May, and the cut flower possibilities for the northern markets are great. Then, again, if one could hold his bulbs in cold storage until August he could have blooms galore in November when you northern growers are frozen up, which would mean a bonanza from the cut blooms. But there is another plant that has caught our attention and which combines the idea of ornament with utility and beats the yam clear out of sight in every way. I refer to the dasheen, which belongs to the same family as the caladium and is far superior to it as an ornamental, and at the same time produces a crop of edible tubers that are superior to

potatoes for table use and even more prolific, producing at the rate of 600 bushels per acre. So we have a cure for hard times. We can sell them for ornamental planting and use them for eating, and I would advise all lovers of plants and flowers to try a few of them, for if the war continues to produce panic conditions in this country it is well to have something you can eat as well as something to admire.

L. H. READ,
(Alabama.)

ORIGINATORS OF VARIETIES.

TO THE EDITOR:—

Will you, please tell me who originated the following varieties? I am making up a book of my varieties and this information would be helpful.

D. E. W. JR.

Adalina Patti,	Hollandia,
Angele,	Intensity,
Brilliant,	Isaac Buchanan,
Canada,	King of Violets,
Carnegie,	Lily Lehman,
Czar Peter,	Master Weitse,
Electra,	Orion,
Eldorado,	Pacha,
Eugene Scribe,	Pactole,
Faust,	Prince of Wales,
General de Nansouty,	Psitticanus,
Glory of Holland,	Senator Volland,
Golden West,	Vivid,
Grenadier,	Willy Wigman,
Hohenzollern,	William Mason.

Will anyone who can do so, please give the information asked. We are all interested in the originators of our well known varieties.—[Editor.]

ADVERTISING PRICES.

The suggestion of the correspondent that advertisers give prices is a good one to a certain extent, but a grower who lists a hundred or more varieties and needs to describe many of them, hardly wishes to use the necessary amount of space—though it might pay in some cases. I do think, however, that it is hardly the proper thing to advertise wholesale prices in a magazine intended largely for retail buyers. It is understood that there must be a difference between wholesale or "trade" prices and retail, to enable the seller to pay for the extra expense attending a retail business; but the margin of profit absolutely necessary for success seems exorbitant to many. For instance: many people would think that to sell *America* at 50c. per doz. (postpaid) which cost only \$10 per thousand is making an exorbitant profit, whereas, in fact if he

can't do about that he had better go out of business—and probably will pretty soon. So I say: Let the wholesale buyer write for his list, if it does cost him a cent.

GEO. S. WOODRUFF.

TIME REQUIRED FOR BLOOMING.

I am enclosing a list of some of my named varieties that I kept a record of this summer. From this it would seem that bulbs planted from the middle of May to June 1st would do fully as well as those planted May 1st. I made quite a number of crosses and secured quite a little seed from which I expect to turn out some very nice varieties. The weather was not very good for the hybridizing but have managed to get about all the seed I can handle at once.

Following is the record of bloom:

Variety	Planted	Bloomed	Days
America	May 2	Aug. 15	104
Andrew Chenere	" 2	" 1	90
Bessie Rand	" 2	" 3	92
Baron Hulot	" 2	" 9	98
Baron Hulot	" 20	" 15	88
Captain Frank	" 2	" 1	90
Farmington	" 2	July 27	85
Golden King	" 2	Aug. 8	98
Baltimore	June 9	" 22	75
Helen Tracy	May 2	" 25	114
Harwinton	" 2	Sept. 4	124
Jessie	" 2	Aug. 27	116
King Philip	" 2	" 25	114
Mrs. Francis King	" 2	" 15	104
Mrs. Frank Pendleton	" 2	" 22	111
Niagara	" 2	Sept. 1	121
Pearl Gates	" 2	Aug. 5	95
Pride of Goshen	" 2	" 19	108
Scarlet Letter	" 2	July 24	82
Treason	" 2	Aug. 3	92
Victory	" 2	" 17	106
Peace	June 9	Sept. 3	88
Dragons Head	May 2	Aug. 9	98
Xmas Candy	" 2	" 1	90

Last summer I planted about May 25 to June 1st, and had blooms very nearly as early and with some earlier or rather in a less number of days.

JESSIE CLEVELAND.
(Connecticut.)

POOR GERMINATION OF BULBLETS.

I note in a recent issue that some growers have trouble with bulblets germinating properly. If they will cover their bulblets with dry sand for storage through the winter, and then before planting in the spring soak them in water 24 hours and get them into the ground before May 1st, there should be no trouble about germinating. The fact that bulblets get too dry is the one and only reason why they fail to germinate as a careful examination of the bulblets that fail to grow will always show that they are alive but sealed in so that they cannot sprout.

PAUL L. WARD.



QUERIES AND ANSWERS DEPARTMENT



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Treatment of Old Bulbs to Restore and Preserve Vitality.

TO THE EDITOR:—

In digging up some of my *Gladiolus* bulbs today, I noticed that some of the largest bulbs had not bloomed. Have they grown too large to ever bloom again, or will they be all right another year? Last autumn I planted a lot of *Gladiolus* bulbs I just dug up out of the garden in the greenhouse, thinking I could make them bloom again, but of course they did not, and when I took them out this spring I found exceptionally fine, large bulbs. Will they bloom next year or shall I throw them away? They were *America* and *Mrs. Francis King*. I think I shall try forcing some again this year as I have been very much interested in Mr. Wilmore's article on the subject in the last number of your very interesting magazine. E. D. R.

Answer:—Old *Gladiolus* corms are as old horses, their day of usefulness is past; they are unable to meet the requirements expected from young stock. It is necessary that they rest in order to regain enough vitality to again throw a flower spike. They become worn out from several causes; the cutting of their foliage, lack of proper culture, disease, etc.

Peel a corm and note the segments or zones. Each is provided with an eye or dormant sprout, the primary eye being the central figure. When the corm becomes aged the zones increase in number also in width but not in thickness, in fact the central zones become thinner in depth thus giving them less vitality and access to the starch stored up in outer zones. Finally the primary eye becomes so weakened that it is unable to start its growth, and the responsibility is thrown upon the outer zones which start their eyes, causing two or more divisions of the corm. In some cases where the greater portion of the vitality is distributed in the outer zones while the central has still enough vigor to start, all will grow, and I have seen as many divisions of the corm as it had segments.

At this period they are not strong and seldom if ever bloom unless they be varieties which are shy producers of cormels. These varieties seem to be more able to

bloom than varieties which are producers, although dividing corms seldom produce cormels at this period and then not freely. These new divisions have stored enough starch with their retained vitality which should have been spent in maturing a flower spike to bloom when again planted, although not all, their surplus energy will again be spent after blooming and they will come blind and divided the second season.

Cutting away the foliage is the most common way to sap the vitality of the plant. One would not consider for a moment cutting away all the foliage from a choice rose bush when picking the blooms. Yet this is the way most of us cut our *Gladioli*, especially those of us who cut for marketing. Bear in mind that every leaf on the plant has a mission to fulfill. In cases of large strong flower spikes the two upper leaves are connected with the stock and help develop the flowers and mature the seeds. All other leaves lead to their respective zones or segments of the corm. When any other than those pertaining to the spike are cut away or injured the corm is affected, and the proper development cannot be accomplished and therefore the central zones suffer as their radicles are abused.

Worn out corms may be strengthened by the following methods.

First. Prepare a good healthy soil full of humus, cultivate often and feed with fertilizers from time to time.

Second. Water freely but do not allow the soil to become soggy. The *Gladiolus* is a great plant for taking up water and responds to this treatment.

Third. As plants begin to show their flower spikes above the uppermost leaves, the spike should be snapped or cut off, forcing the strength that would naturally be spent in developing the flowers back into the corm.

Old corms should never be forced. They are too uncertain. It is best to always grow a fresh stock each year from cormels so that when stock becomes old it can be thrown away. They are unsatisfactory

at best. The spikes are shorter, flowers are smaller than those of the same sized corms grown of virgin stock.

I would advise that "E. D. R." save the corms for a trial next season but would not advise trying to force them.

W. W. WILMORE, JR.

Forcing Gladioli in California.

TO THE EDITOR:—

The Gladiolus does well with us in California, and I have a few varieties almost ready for blooming now (April 1st). I am in doubt, however, whether they will give me flower spikes until the weather warms up somewhat. I experimented this year in planting a few rows very early, some as early as November and some in January. The November planted ones refused to come up until about January 1st. Is there any way of forcing bloom so that I can get results in the winter?

M. B. C.

Answer:—Your question as to forcing bloom in winter is noted, and your failure to secure results along this line is, doubtless, because of the fact that the bulbs had not arrived at the right point in their life history to start growth and throw a flower spike. Bulbs dug in the fall and planted again directly are being put through an unnatural chain of existence, and are quite likely to rot in the ground, to say nothing about failing to bloom. It is natural that a bulb should go through a period of rest after digging and be dried slightly and stored for several months before being put into the ground for the purpose of starting growth again. This matter is covered somewhat by editorial suggestions as to cold storage on page 71 of the May issue. By putting the bulbs into cold storage after digging and curing it is thought that they may be safely carried past their period of natural growth, and then if planted in the fall of the year under your California conditions, that they would come into bloom in the open ground, the same as they would in the Eastern climate if forced in the greenhouses.

MADISON COOPER.

Those of our readers who are interested in helping THE MODERN GLADIOLUS GROWER to disseminate useful information about the Gladiolus and also to help encourage a love for the beautiful, are requested to send us the names of those who are growing Gladioli even in a small way, or those who might be interested in growing Gladioli, so that we may send them sample copies and solicit their subscriptions.

The Hunt Seedlings.

It will perhaps be remembered that when the attention of the public was last spring called to the fact that the stock of Gladioli grown by the late A. W. Hunt, of Warren, O., had been placed in the hands of his friend, W. A. Christy, of Maple-shade Gladiolus Farm, for disposal, the latter expressed the hope that in the stock of seedlings there might be found, when developed, some one worthy to perpetuate the name of the late grower.

It is a pleasure to state that while the bulk of this seedling stock has proved, as is usual with such stock, of quite mediocre quality, there were a few of superior grade. One of these is a brilliant dark crimson, a notable flower that would attract instant attention in any collection, showing up in fine form and color as far as it could be seen, and if it retains its present characteristics under future culture will surely gain the favor of growers. It is grown from hand pollinated seed, the parents being *Princeps* x *White Lady*, and is seemingly more sturdy than either. The single corm, at its first blooming, in an unfavorable season produced 40 good cormels, and if it continues this rate of increase, will in a few years be brought into notice under the name of A. W. Hunt.

Price list of Gladiolus bulbs for 1914 and 1915 which are for sale by M. F. Wright, 1906 Smith St., Fort Wayne, Ind., has been received at this office. Mr. Wright lists some of the very best varieties, among which are a considerable proportion of the varieties of A. E. Kunderd. Some of these varieties are of recent introduction and not generally listed and growers who are interested in new and improved sorts will do well to get Mr. Wright's list.

The new retail catalogue of A. E. Kunderd, Goshen, Ind., for 1915 is to hand. This catalogue is a good piece of work typographically and Mr. Kunderd has displayed much good judgment in its arrangement and in showing his special varieties which are already too well known to need an introduction. In addition to the older Kunderdi varieties with which we are all familiar, there are a number of others of recent introduction which promise to surpass any of the former introductions. The catalogue is well illustrated and contains testimonials of prominent growers as well as directions for planting, culture, etc. Everyone should have the new Kunderd catalogue which can be had on request.

THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.
Published Monthly by Madison Cooper, Calcium, New York.

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GLADIOLUS—
SCHWABEN.

Originated by
Wilhelm Pfitzer,
Stuttgart.

(For complete history and description see page 24.)

The Gladiolus.

PAPER BY MR. E. T. WHEADON.

In Guernsey Growers' Association Year Book, 1914.

[Concluded from January issue.]

EARLY FLOWERING SECTION.

I would like now to say something with regard to the early flowering section. We all know such varieties as *Blushing Bride*, *Red Prince*, *Cardinalis Elegans*, *Delicatisima Superbissima*, *Crimson Queen*, *Ardens*, *Gen. Scott*, and in the newer varieties *Fiery Knight*, *Peach Blossom*, *The Queen*, *Little Lady*, *Lucretia*, *Rose Queen*, while such sorts as *Queen Mary*, *Mrs. Atkinson*, *Innocence*, *King Edward VII.*, and *The Cardinal*, which have gained awards during the past two or three years, have not (with the exception of *King Edward VII.*) yet found their way into commerce. This race of Gladioli is particularly interesting to us in Guernsey, because all the varieties I have named and many more were raised here. The late Messrs. C. Smith and S. Priaulx being amongst the pioneers of this work, while latterly much good work has been done amongst others by Messrs. C. Smith and Sons, F. Lilley, C. B. Blampied, F. Guilcher, and Le Page, varieties of whose raising have all obtained awards recently. We have reason to hope that in the near future some other varieties of real merit will be added to our lists. I have taken a good deal of interest in this work and now have a considerable number of seedlings under trial, some of which I hope may merit a place amongst the standard varieties. Looking over the leading kinds now in commerce I can only trace a few varieties of any merit which have been raised outside of Guernsey such as *Ackerman*, *Excelsior* and *Queen Wilhelmina*.

This early section is also of importance to us here because our climate suits them admirably. They stand our ordinary winter without any protection outside and propagate freely. It is a crop that is grown on a very large scale outside for cut bloom, while for indoor work they are particularly suitable. Some skilled forcers have had them to flower as early as March, but with ordinary care they come out in April, or if in cool houses, in May. Their bulbs being small a much larger number can be grown in a pot than with the late flowering section which has very large bulbs. As to colouring, they have not such a wide range as the late ones, but they include tints and soft tones which cannot be found in the tall varieties.

What more delicate colours can be found than the pink of *Peach Blossom* or the salmon of *Queen Mary*; the blush white of *Blushing Bride*, *The Queen* and *Delic. Superbissima*, while the white of *The Bride* with its delicate tint of green will always be in great demand. If we look to the deeper colours, we find in *Cardinalis Elegans* the very brightest of fiery scarlets set off with its pure white flakes, while *Ardens*, *Fiery Knight*, *Crimson Queen*, are all scarlet varieties of great merit.

The origin of this race is shrouded in some mystery, but it is generally supposed to have originated from crosses between two or more of the following species: *G. Trimaculatus*, *G. Tristis*, *G. Blandus* and *G. Cardinalis*. *G. Colvilli*, which originated with a Mr. Colvill, is said by some to have been a cross between *G. Tristis Concolor* and *G. Cardinalis*. This hybrid was brought into commerce in 1823. About 1872 it sported white on two farms at the same time near Overveen, Holland. This sport became known as *Colvilli Alba*, the white variety with coloured stamens. This sensational novelty was surpassed some years later by an entirely white form which was introduced into commerce as *The Bride*.

As regard culture, the early Gladiolus seems to thrive nearly everywhere in Guernsey, but preferably they should be given a good deep rich soil in a sheltered position, shaded somewhat from the full force of the noonday sun. No fresh manure should be used for them, but well-decayed manure may with advantage be dug in some time before planting, so as to become thoroughly incorporated with the soil. They appreciate having the ground deeply worked, as this enables them to hold out when the dry weather comes in the late Spring.

With our mild winters we are able to plant in August, September or October and ensure a good crop of flowers, provided always that we do not get an exceptionally hard frost. In Holland they always wait till Spring to plant, as otherwise they would certainly suffer through freezing. We usually plant about four inches deep, giving four inches space between the bulbs, and whenever possible give a mulching of strawy manure just before

they show through. We invariably take the opportunity of raking over the beds just before mulching to kill all weeds, as this can be done so much more cheaply at this stage than later, our conditions being altogether unlike those obtaining with the Americans, who plant their late Glads. in rows about $2\frac{1}{2}$ ft. apart and are able to run their horse hoes between. No other attention has to be given to them beyond keeping them free of weeds till flowering time, unless the weather is particularly dry in which case they can be watered with advantage. I should like here to lay stress on the way they should be watered. Do not give water "little and often"; an excellent rule when applying manures, but a very bad one when watering plants in the open ground. When watering give a thorough soaking and only repeat this two or three times at most. Be careful after watering to keep the surface of the soil stirred if you have no mulch. By August these varieties are ready to be lifted and must be got out without delay, as within a week or two they will be starting again if left undisturbed. We have sometimes left a piece of Gladioli in the ground for two years and have obtained an excellent crop of bloom from such varieties as *Blushing Bride* and *Crimson Queen*, but we have often found that after carrying their heavy crop the corms are so impoverished that they were hardly worth lifting. We therefore find it advisable to lift each year all the more expensive varieties and any we wish to propagate.

For pot culture these early flowering kinds are unsurpassed. *The Bride*, *Blushing Bride*, *Cardinalis Elegans*, *Ackerman*, *The Queen*, *Excelsior*, *Peach Blossom* do very well. *Queen of Holland*, a dwarf variety of delicate colouring, is also useful in this way, though we find it too short for cutting when growing in the open. About five bulbs may be put in a five or six inch pot, the pots carefully drained and fairly light rich soil used. Treat up till November in exactly the same way as Narcissi intended for forcing; as soon as there is risk of frost place them in a greenhouse or frame, frost should on no account touch them as even the slightest check will delay them flowering if it did not prevent it altogether. We find Glads. in pots very much more susceptible to frost than when grown in the open field. By February they are ready to take a very slight heat, say 55 degrees. Keep them in the full light; take great care as regards watering, and on no account try to force them hard, as if you do they will fail to bloom, or if a

spike forms it will lack substance and be from a market point of view at any rate, worthless.

For cutting and house decoration the *Nanus* far surpasses in usefulness the other sections, their slight stems and graceful bearing enable them to be arranged much more artistically; in vases they produce a most agreeable effect, their slender elegance and grace contrast markedly with the imposing but stiff and ponderous beauty of the larger flowered kinds. Whatever changes take place, and improvements are being made at a remarkable pace in the late section, there will be still room for these smaller flowers, which on account of their earliness and beauty will always be wanted.

THE FUTURE.

Now what of the future? We have traced the wonderful development during the past 60 or 70 years. What is going to take place during the next ten? Let us again consider this in the two sections, Early and Late Flowering.

Take the Earlies first. Will Guernsey maintain its pre-eminence in the further development of these? I think so, as few but Guernsey varieties have obtained recognition. Some exhibited and given awards in Holland such as *The Queen* and *The King* are of Guernsey origin and I have little doubt that many more of Island raising will in the near future come to the front. Still it behoves us to persevere as the Dutch growers who have so keenly taken up the cultivation of these will probably not be behindhand in their efforts to improve them. I wonder if it will be possible to get the new blue and yellow shades into this section. Mr. Le Page's *Innocence* appears to be a pure white of true *Nanus* blood, and I have very little doubt will prove to be a great acquisition.

I hope that hybridizers will keep before them the right ideals. I suggest that we want in addition to pleasing colouring the following characteristics:—

Tall branching spikes. Flowers well expanded, of good substance with clear and regular markings, opening well in water and standing transit to distant markets. Plants of robust character with clean, healthy foliage and capacity for fairly rapid propagation. They must also be free-flowering and should be capable of being forced. They should not be over susceptible to frost.

There seems to be room for varieties flowering just ahead of our present kinds, and also for some which will carry us through July and into early August. Mr.

C. G. Van Tubergen, Junr., of Haarlem, has been crossing *G. Alatus* and *G. Cuspidatus* and has produced a strain which he has named *Express*; these flower with him some three weeks ahead of the earliest of the *Nanus* varieties, they are very free flowering but are very dwarf, the flowers of medium size, of charming colour of rosy salmon with golden brown markings. While I do not think that they have any very great value, still they seem to point the way to further advances in this direction. Before leaving this section may I again lay stress on the importance of vigour in all varieties introduced into commerce, as even such a grand flower as *Insignis* is in danger of being lost through not being able to stand ordinary culture. I do not think that there is much I can say about the lines on which improvement is likely to take place in the late section. There is little doubt that much will be done in improving the blues and the yellows and that more whites will be raised. We might for a moment review the ideals of the older raisers and consider whether or no they have been attained.

Mr. James Kelway tells us that as far back as 1874 he had a conversation with M. Souchet and M. Vilmorin at Paris upon what they considered perfection. The French raisers considered that the spikes should be long, the flowers evenly disposed and standing quite independently of one another so that you might see between them. They considered the English types heavy and lumpy, theirs light and elegant. Mr. Kelway gives his idea of a perfect plant: One of robust habit, strong constitution, and tall growth, the spikes long, carrying not less than eight or ten blossoms at one time, the foliage broad, the flowers so disposed as to come naturally to the fore and to touch one another so as to completely hide the stem; the individual blooms should be four or five inches across, the petals broad and of good substance and endurance, not inclined to curl at the edges; the ground colour pure, but if containing two or more tints the flakes should be of a deeper shade and the lines in the centre of the petals should be clearly defined.

We have many varieties that have attained greater size than the above, but few, if any, which combine all the qualities there enumerated.

One American raiser has introduced a ruffled type which he hopes will have the same measure of success as the *Spencers in Sweet Peas*, but it is a matter of opinion whether or no waviness is an advantage with *Gladiolus* flowers.

The *Gladiolus* during the past fifty

years has given us many surprises. I have no doubt that it has many more surprises in store for us in the next decade or two.



A Field of Young Gladioli
Under Irrigation.

Photograph secured on the grounds of W. W. Wilmore, Jr., Wheatridge, Colo. The method of flowing the water for irrigating between the rows of Gladioli is very clearly shown in the center of the photograph.

The wholesale price list and catalogue of Gladioli, issued by John Lewis Childs, Flowerfield, L. I. for the year 1915 has been received. In addition to the well known Childs varieties, there are many of the standard home originated and imported varieties listed. The catalogue is especially valuable on account of the large illustrations of some of the more prominent varieties. Every page contains illustrations which should prove useful for reference purposes. A copy of this price list should be in the hands of every florist and dealer, and it can doubtless be had on request.

MRS. AUSTIN'S TALKS FOR AMATEURS.

NAMING GLADIOLUS SEEDLINGS.

Years ago some of the most interesting and exciting stories told children were of the habits, customs, etc., of the American Indians, and one of them was to the effect that when there was a new-comer in the family, that the man of the house, or rather the chieftain of the wigwam, went forth into the open and whatever first met his gaze would be the name of the little papoose.

This was quite a helpful story for youngsters, the idea being of great assistance in christening numerous kittens, and by this method the barnyard chanticleer became a soaring Eagle, any little black pullet, the Raven, and the dear old lilac bush, Rivenoak. There was so much exciting speculation as to what object might be the first the eye would rest upon, that the game never lost its charm.

In naming Gladiolus seedlings, the thought that comes as we see the first bloom, or some incident which might lead to a name, even if only a temporary one, will bring a mental picture of that particular bloom to mind much more clearly than a number.

Growing seedlings under number in the test plot is much like having charge of a squad of prisoners who have lost their individuality, but if the seedlings are named, the test plot becomes a training school where each little trait of character is studied and developed.

Here's a handful of seed, fresh, plump and daintily clothed in their pale pink suits shouldered with gauzy wings of gold. Curious little live things, and we wonder what secrets they have hidden in their hearts. We believe a goodly number will give us good blooms for they have a good ancestry. We are acquainted with their parents and their grand-parents and we know of family traits and inherent qualities which, if they might be transmitted to reappear in combination would be an advancement over the present types and a step nearer to the ideal flower of our dreams.

The blooms appear and some seem to have been given the colors of their environment. This blue throated white reminds us of a glistening, snowy landscape, the curving of the petals is the sloping of the hillsides, the soft blue marking in the throat, the blue vistas of the woodlands. A bride of winter is Bluvista.

And just as truly is this other, the glory

of a midsummer day, with its golden yellow shadings, and it goes into the test plot with the temporary name of Glory-day.

There are many quite pretty ones that we will not grow, for only those showing some special distinctive trait, sufficient to catch the eye of the casual observer are worth the work of special testing.

But what is this bloom of immense size that causes us to pause and smile, as we watch it merrily bobbing and dancing before us. A moment's thought and surely it is the cap and bells of Wamba, the favorite clown of Cedric (Ivanhoe.)

A little farther on we find one of tall, strong growth pushing forth a graceful spike. The buds appear as the first hint of a sunrise followed by its full glory in the opened flower. We revel in its beauty, it becomes a living personality, and as it faces the world fearlessly seems to say in its own sign language: "I have received this endowment of beauty for a purpose; I have a mission to perform, send me." No name suggests itself, it will take time to choose one, and as number 58 we guard it carefully.

A child came into the field, wandering happily among the flowers, acknowledging them as fitting and congenial companions, watching the nodding blooms and floating butterflies suddenly halting beside No. 58. She recognized its personality, it appealed to her, she could not leave it, it must be hers. Would she accept the gift of bloom? No, with the sturdy independence of her German ancestry they must be hers, but bought with money earned by her own tiny hands. A pleasing incident, and into the world will go the beautiful flower bearing the sweet personality, and the name of little Gretchen Zang.

HINTS.

Now is the time to look over all planting stock and bulblets. They have had a rest and are perfectly willing to grow if they have a chance and must be kept cool and spread thinly.

The catalogues are coming and selection of varieties and plans for the coming season should begin to take form.

MRS. A. H. AUSTIN.

Two separate price lists of Gladioli have been received from John H. Umpleby, Lake View, N. Y. The list for the retail trade contains thirty varieties briefly described and priced by the single bulb and per dozen. The wholesale list prices eight varieties only by the dozen, hundred and thousand.

Amateur or Professional?

THE MODERN GLADIOLUS GROWER is published for both professional and amateur growers, although the amateur is mentioned first—and I believe that he was first. When I took up the Nov. issue and noticed Mr. J. M. Adams' question, "What is An Amateur?" I became interested, as I have had something to say on the subject in our own Horticultural Society.

Mr. Adams states that he had "Five Hundred" dahlia plants, (a pretty good collection for an amateur!) He says, "I cannot hope to enter into competition with growers of acres of dahlias." Then how can an amateur with a dozen and a half plants compete with him? Then he asks, "What incentive has anyone to grow flowers and show them?" "And where will the professional growers be if they have no amateurs to sell their stock to?"

I will give you my experience for an answer to that question: One day, a few weeks ago, one of my retail customers said to me, "The more bulbs you sell in the spring the less flowers you sell in the summer." I had been supplying him with Gladioli for \$2.00 per hundred. I came into his store and found 2,000 from some other grower and was told there was nothing doing. "Bought them cheaper?" "Yes." All that were not sold were taken back, more than half were taken back and no more were sent.

Some years ago I was supplying the stores with coreopsis at 40c. per hundred. One morning I found many hundred in the store and was told, "None wanted." "Got them cheaper?" "Yes, 10c. per hundred—300 for 25c." I quit. The next year my amateur was out of business and the stores had no coreopsis.

Last year I was supplying the best double blue corn flower for 50c. per hundred. By and by I found a quantity of old single common stock in the market 25c. per hundred, and mine were not wanted. I dug up my stock and retired in favor of the amateurs. Last summer we grew the best new aster that we could find in the market. We were selling for \$1.00 per hundred, when the amateurs commenced to peddle their cheap grade on the street for 10c. and 15c. per dozen, our price was cut to 50c. per hundred. Some years ago I grew pansies for the trade. I bought the best imported seed and charged \$1.50 per hundred for the plants. After a while I found quantities of dingy, dirty looking stock in the market, while I was told to bring 100 white, 50 yellow, 50 blue, and that they would not

pay more than \$1.00 per hundred. I did not sell more than half of my stock, so I decided that I would give up that part of my business to the amateur, rather than supply a few of the best to help sell their common stock. Now the amateur has given up and the dealers have to get their pansies from other towns.

For some years past I have offered fifteen dollars' worth of dahlia plants for prizes for amateurs. A man came to me the other day and told me he had won \$4.00 worth of my dahlias, and wanted to select them. He told me he had one hundred varieties, and that he had been selling cut flowers all summer and had taken more orders for plants in the spring than ever before, and he was an amateur. A few weeks' ago one of our amateurs came to me to see if I would let him handle my surplus stock. He advertises them by the dozen and by the hundred. Now, I would like to know what Mr. Adams thinks I am getting by selling to amateurs. Does the amateur elevate or degrade the business by such practices as I have related?

The idea is to encourage amateurs to grow the beautiful for their *own* benefit, to brighten and beautify their own back yards. Instead of tin cans and heaps of ashes, a few dahlias, Gladioli and geraniums would make his home more attractive and he would become a better man by working in this way, than he will by going to a saloon, nicolet or such places. Mr. Adams calls on the amateur to speak up. *Let 'em come.*

J. H. SLOCOMBE.

American Gladiolus Society.

Henry Youell, No. 538 Cedar St., Syracuse, N. Y., Secretary of the American Gladiolus Society, states that he has already secured a nice list of prizes for the flower show of the society to be held at Newport, R. I., on August 18th and 19th. It is hoped to make the show a record breaker, and that there will be a generous contribution of prizes to encourage a liberal entry and big display of bloom. We expect to print the preliminary schedule in our March issue.

At the time of going to press the following prizes have been offered:

- T. A. Havemeyer, six prizes.
- Charles F. Fairbanks, three prizes.
- Stump & Walter, one prize.
- Chamberlain & Co., two prizes.
- Clark W. Brown, two prizes.
- E. E. Stewart, ten prizes.
- W. W. Wilmore, Jr., four prizes.
- G. D. Black, one prize.
- THE MODERN GLADIOLUS GROWER, one prize.
- Bidwell & Fobes, two prizes.
- Arthur Cowee, four prizes.
- B. H. Tracy, one prize.

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
PUBLISHED MONTHLY ON THE FIRST OF THE MONTH BY
MADISON COOPER, CALCIUM, N.Y.

Subscription Price:
50c. per year,
3 years for \$1.00.

OUR MOTTO:
Special favors to none, and a square deal to all.

Canadian and Foreign
Subscription Price
75c. per year

Growers are invited to contribute articles or notes over their own signatures, but the Editor reserves the right to reject anything which in his judgment is not conducive to the general welfare of the business.

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Vol. II.

February 1915

No. 2

Gladiolus Diseases.

Growers of the Gladiolus know that the growing plant is exceptionally free from diseases and insects. Unfortunately the same cannot be said of the stored corms. It frequently happens that corms which are apparently healthy when stored come out in the spring shriveled and black, with hollowed centers and impaired root systems or affected with a brownish dry decay.

These diseases have been the subject of special study at Cornell University for the past three years. The work has been done by Mr. L. M. Massey under direct commission of the New York State Legislature. Aside from laboratory studies, much work has been done in the fields of Mr. Arthur Cowee, Berlin, N. Y., looking towards the control of these various troubles. It has been demonstrated that most of the troubles are infectious in nature but a suitable method of treating affected plants has not yet been devised. The only safe way is to isolate suspected cases and if affected handle them as in the case of animal diseases such as the dreaded foot and mouth disease.

In the past many contributions of material have been received from growers which have materially aided the work. As these storage troubles will be quite noticeable by the end of December all

growers can assist in this investigation by examining their stock and sending to the University any specimens that show abnormal conditions. Any notes or observations on the nature or extent of the various troubles will be appreciated. Specimens may be sent by parcel post directly to Mr. L. M. Massey, College of Agriculture, Ithaca, N. Y. They will be examined and a report made whenever possible.

DONALD REDDICK,
Professor of Plant Pathology,
Cornell University,
Ithaca, N. Y.

Amateur or Professional?

All of the authority that time can give is this month laid before us in the "Way-side Ramblings Department" under the above heading. Just how long the Royal Horticultural Society has been in existence we will not presume to state, but it has certainly been many years and matters of this kind in England have been worked out and decided years ago that still are imperfect and unsettled with us. The definition of the word amateur as given in the quotation referred to is so wholly in harmony with our ideas that comment is quite superfluous. The definition as given is certainly in keeping with common sense and usage although perhaps not satisfying to those who wish to split hairs or stand on a technicality.

The contention that it is difficult to draw any line between the amateur who sells some of his product and the professional who makes a business of it, is not deciding the matter on a fair basis. In our opinion it is entirely safe to let the amateur state his own classification when making the entry. If he is a professional in fact and enters as an amateur he should be penalized, but it is not fair to draw the line closely and call an amateur a professional when he only sells his product incidentally and in a small way. It is not a question of how large a quantity the flower grower sells, but his motive in doing so, that classifies him as a professional or an amateur. The question of motive is the sum of the matter in a nut shell, and if the motive is determined the classification at once becomes plain.

MADISON COOPER.

One of our advertisers who is careful to differentiate between the retail and wholesale trade writes us that growers who are entitled to wholesale prices should use printed stationery, and we are glad to print the suggestion for the benefit of those who answer advertisements. Amateurs or retail purchasers are not entitled to wholesale prices, and this really should be plain without pointing it out. Those who are professionals and make a business of floriculture should have printed stationery so that they will get wholesale prices without delay. Advertisers should be careful to omit quoting wholesale prices in their advertising, and it is perfectly correct and fair to all concerned.

One of our valued contributors has suggested that our illustrations of Gladioli are not as good as they should be or might be. We are quite willing to acknowledge that this is so, but we must at the same time admit that we are unable to help ourselves in this respect. To start with, it is very difficult indeed to get clear photographs of Gladioli which will make good engravings; and the difficulty of getting good engravings is also ever

present. We are always thankful for good, clear photographs of the old established varieties and growers having such will confer a great favor by sending them in. We cannot, of course, illustrate varieties which are not as yet introduced, or varieties that are controlled by one person or a few people, for reasons which are quite obvious.

An Experiment with Weak Bulbs.

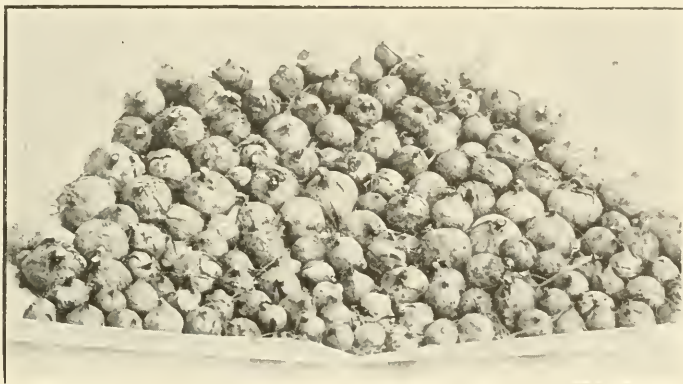
I have had in past years among valuable named varieties, of which I sometimes had only one or two bulbs, those which failed to give a good plant or blossom. Digging them up I have found weak bulbs although many times the bulbs had no trace of disease. In 1913 I planted a lot of named varieties of a well-known hybridizer but I got them in the ground so early and planted them so deep that many even failed to show a plant above the ground. In digging the bulbs I found some of these had grown a small bulb about the size of a filbert but had put out no stalk at all. So in 1914 I prepared an experimental plot in a favorable location and put all kinds of immature and freak bulbs in it. The results were astonishing. From a small bulb about one-half an inch in diameter and which last year had no plant above ground, I got an immense plant and blossom—the very best blossom, I consider, in my garden for the season. Another sickly variety that had grown several years with indifferent results, and the bulb of which had diminished to almost nothing, gave me a very tall and vigorous plant and flower. Many did not do so well, but nearly all gave me bulbs in the fall much improved in appearance and size. In a few cases the bulbs rotted or withered, being too far gone when planted. So I have concluded that a favorable corner should be reserved for such bulbs each season. For the large grower, of course, such a corner might be but a bother but when it is considered that the flower above mentioned as giving me the best blossom in my garden for the summer was listed at \$5.00 a bulb in 1913, such a corner is worth while to the amateur. The spot I selected was sunny with a good depth of good potting soil, no fertilizer being used. They were simply kept well watered and the ground well stirred around them. The bulbs were not covered very deeply at first, the earth being filled in around the plants as they grew above the ground.

FRANK S. MORTON.

WAYSIDE RAMBLINGS.

GLADIOLUS BLOOM FROM SEED THE FIRST YEAR.

I am enclosing photo of a few seedling bulbs that I grew this year from seed. About two-thirds of these bulbs bloomed. Seed was planted in hot bed March 14th. The first bloom was cut Aug. 28th. The last was cut on Oct. 22. Dug my seedling bulbs on the 25th Oct. Seed planted were from Bidwell & Fobes, B. H. Tracy and some of my own growing. Have one seedling from Bidwell & Fobes seed that is a duplicate of the Killarney rose. Several of my friends that have Killarney roses gave my seedling the name of Killarney upon first sight. Have several white and near white seedlings this year.



Seedling bulbs first year from seed.—R. Charlton, Jr.

Had⁷ thought that forcing that I gave my 1913 seedlings would affect the bloom for this year. Such is not the case, as nearly every 1913 seedling bloomed in 1914. The whites are not very strong multipliers. Several of the bulbs shown in photo had from five to fourteen small bulblets on them when dug up. Have planted 1000 of the Nanus and Colvillei types of Gladioli in cold frame and will let you know what success I have in growing them. RALPH CHARLTON, JR.

(See Mr. Charlton's article in the Sept. issue, page 137.)

AMATEUR OR PROFESSIONAL?

TO THE EDITOR:—

Apropos of the discussion of "Amateur" I copy here the definition of the word by the Royal Horticultural Society of Eng-

land, and this agrees with your contention:

"By the word amateur is understood a person who maintains a garden with a view to his own use and enjoyment and not for the purpose of making a profit or gaining a livelihood. The fact of his disposing of surplus produce for money does not change him into a tradesman unless the maintenance of the garden is intended to return him an annual profit."—Daffodil Year Book 1914—p. 136.

L. K.

CYCLE OF PLANT GROWTH.

"Cycle of Plant Growth," seems to have the floor at present, and honestly it was our intention to allow this subject to pass by, but simply can't help but shoot a few wads. Last Fall we planted our Gladiolus seed in November in a greenhouse and the little plants made a fine growth and

were ripened off in March. (By the way, we consider a small greenhouse a valuable adjunct to any Gladiolus grower and our little house 16x30 feet only cost \$150, including the hot-water heating system. We built it at spare times and have not counted in our own labor. This house furnishes a lot of pleasure and makes it possible to carry on experiments that otherwise could not be done. Furthermore it is possible to have Gladiolus spikes nine months of the year.)

The seedling bulbs were allowed to rest four weeks and then replanted, some in the greenhouse, others in a cold-frame and still another lot out in the field. About twelve thousand were thus planted. In all eighteen of these seedlings have bloomed, ranging in time from ten to eleven months from the time the seed was sown. Heat and moisture will work wonders in the

growing of Gladioli. Are confident that many more would have bloomed had they not been planted so close together. Today (October 12) some of the field planted seedlings are in bud and our season in this locality has been very dry. Furthermore those grown in the greenhouse and cold-frames where abundant moisture was supplied, many of them have made bulbs over one and one-half inches in diameter—plump fellows with a lot of bulblets.

We tried the planting of bulblets in the same manner without nearly so good success. The bulblets were planted in November in the greenhouse, made a good growth and were ripened off in March. These grew from one-quarter to three-quarters of an inch in diameter. These bulblet grown bulbs were allowed to cure for a month and then planted. They seemed perfectly dry and ripe.

Did they come up quick like the seed grown bulbs? Not so. Many of them have been in the ground four months and are not up yet. Some varieties have come reasonably well and others like *Princeps*, have not budged. We are satisfied that bulblet grown bulbs and bulb grown bulbs require considerable of a period of rest. JOE COLEMAN.

TIME FROM PLANTING TO BLOOMING.

As there are many requests from people desiring to have Gladioli in bloom at a certain time, as to the proper date to plant the different varieties, the following list will no doubt be of considerable interest and value.

The figures are taken from the records kept by Mr. R. P. Benedict, of Syracuse, N. Y., who is a most enthusiastic and careful grower.

At planting time the bulbs were divided into three lots as nearly as possible and planted May 27, June 3 and June 10.

	First Bloom	Last Bloom	Days to first Bloom
Amaryllis.....	Aug. 20	Sept. 8	85
America.....	Aug. 10	Oct. 2	75
Augusta.....	Aug. 28	Oct. 2	93
A. W. Clifford.....	Aug. 7	Sept. 1	72
Baron Hulot.....	Aug. 20	Sept. 6	85
Canary Bird.....	Aug. 23	Oct. 2	95
Chicago White.....	Aug. 7	Sept. 1	72
Golden West.....	Aug. 10	Sept. 8	75
Governor Hanley.....	Aug. 5	Sept. 1	70
Halley.....	Aug. 6	Sept. 1	71
Ida Van.....	Aug. 18	Oct. 2	83
Independence.....	Aug. 20	Sept. 24	85
Mrs. F. King.....	Aug. 25	Oct. 17	90
Niagara.....	Aug. 19	Oct. 10	84
Panama.....	Aug. 23	Sept. 8	88
Princeline.....	Aug. 19	Sept. 20	84
Taconic.....	Aug. 20	Sept. 20	85

The shortest season was with *Panama* which lasted for 16 days and the longest

was *Mrs. F. King* which was 54 days from the first to the last bloom.

The earliest was *Gov. Hanley* with *Halley* second and *A. W. Clifford* and *Chicago White* tied for third.

As conditions vary so much in different places and from one season to another these figures would naturally be variable but if others would send in similar records we could then get an average.

C. W. BROWN.

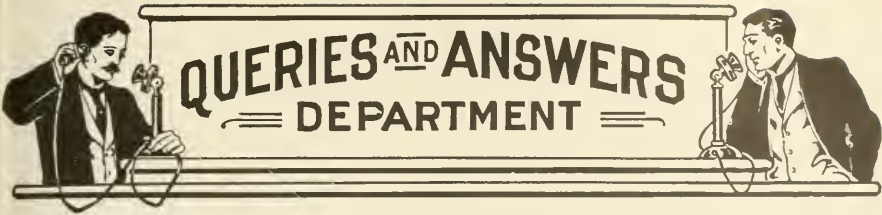
"GLADIOLUS" AS AN ADJECTIVE.

There seems to be some confusion among some who are high in the profession (or business) as to the proper form of the word used adjectively. Thus we read of "The ——— Gladioli Company", "Gladioli List" etc. etc. As I understand the matter, *all* nouns used as adjectives are used in the *singular*. For instance, a barn for horses is a "horse barn", not a "horses barn". So, in like manner, a garden of Gladioli (plural) is a Gladiolus garden (singular). Verbal criticism is said to be disagreeable but we may as well use our language correctly while we are about it. GEO. S. WOODRUFF.

A simple way to apply a test as to whether the singular or plural should be used, is to substitute the word rose for Gladiolus. The singular and plural of rose are so familiar that we cannot go wrong. You would not say a roses garden, yet how easy to fall into the habit of saying Gladioli garden, when it should be Gladiolus garden. (Editor.)

The 1915 retail catalogue and price list of Chamberlain & Co. is to hand. It contains a select and desirable list of the standard and new varieties with a brief description of each one, and price by the single bulb and by the dozen. With the catalogue is enclosed a folder entitled "The Gladiolus and How to Grow It." This gives a little history of the Gladiolus with some cultural directions and, together with the catalogue, it may be had on application to Chamberlain & Co., Mayo Farm, Weston Road, Wellesley, Mass.

Krelage & Son's retail catalogue for 1915 with prices on Gladioli and other bulbs is to hand. This comes to us from Mr. J. A. De Veer, 100 William St., New York, who is the sole representative in the United States of the above firm. Besides listing begonias, cannas, dahlias, etc., some space is given to Gladioli, including the new varieties introduced by this firm.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Exhibiting Gladioli at Fairs— Suggestion for Staging, Etc.

TO THE EDITOR:—

We have a bunch of "Glad-bugs" who want to put on a "Glad" show at the county fair next fall. We need information. How shall the exhibit be arranged and how shall the varieties be grouped? How shall they be judged? What are the points allowed, etc.? We would like you to take up this matter in THE MODERN GLADIOLUS GROWER at an early date so we can all get busy at planting time for we are all going after the blue ribbon.

S. H. J.

Answer:—Each fair is a "Law unto itself" on the matter of offering prizes and making rules, and, therefore, nothing very definite can be said along this line. Generally, however, the County Fair offers two or three prizes for Gladioli, and speaking of our own County Fair here (Jefferson Co., N. Y.), they offer a prize in the "Open Class" which can be competed for by both amateurs and professionals, for the best display of Gladioli. In the "Amateur Class" they offer two prizes, one for the best display and the other for the best display of named varieties. No specification is given as to the number of varieties or the number of vases or the quantity to be shown in any way; hence it would seem that a person who is able to make the largest display, providing his quality is fairly good, has the greatest advantage. In competing in the "Open Class" against the florists I have had no difficulty in taking first premium whenever I have exhibited, but I have put up a pretty large display and largely of named varieties.

The best way of displaying cut Gladioli is in vases, and at County Fairs these are commonly furnished by the exhibitor. The first year I exhibited I was foolish enough to pay out considerable money for fancy glass vases, but latterly have been using ordinary Mason quart fruit jars as they are just about the right size for six to eight flower spikes, and they have a broad base to support them properly. The tall earthenware vases used by the florists are good for displaying a large bunch of

mixed varieties or of one single variety. Gallon or half gallon butter jars may also be used to advantage.

The grouping of the varieties is left to the exhibitor and this must depend on the natural taste of the person making the arrangement. It is usually well to keep the taller and darker colors in the background and the small and lighter colors in the foreground, but this might be varied to suit individual tastes and would depend also on what sort of benches or tables were used for staging the exhibit.

The question of judging is one which very little can be said about. The judges of Gladioli usually judge all floral displays including potted plants and cut flowers and often the fruit display as well as fancy work, chickens, horses, etc., but this, of course, is quite ridiculous and also quite unsatisfactory at times. A real flower judge should be available for this work and he should know something about the flowers he is to judge. The question of points in judging are commonly entirely neglected at the County Fairs and I think this will apply to State Fairs as well.

If Gladiolus enthusiasts in every county where the Agricultural Society holds an annual fair would only take the matter up and make an exhibit for a year or two whether prizes are offered or not, it is quite certain that the directors will be glad to encourage the work and offer suitable prizes. This is one of the very best ways to create an interest in flowers and the Gladiolus is usually at its best at fair time.

MADISON COOPER.

Loss of Vitality in Old Gladiolus Corms.

TO THE EDITOR:—

Is it a fact that Gladiolus bulbs or corms can get old to a point where they are valueless? My experience is that when they get old, they do one of two things: either rot in the ground after planting or divide up into several corms. If they rot in the ground, that is, of course, positive proof that their vitality is gone, but what I wanted to know (and here seems to be the point) is whether the divisions, where the bulb divides into

several corms, will grow a good flower spike when planted the next season, and will the new bulbs from these divisions have good vitality if properly nourished? Perhaps if I were more experienced I would be able to answer my own question, but I am comparatively new in Gladiolus growing and any information you can give will be helpful I am sure. M. C.

Answer:—If thoroughly exhausted, corms will upon planting rot in the soil without even starting a sprout. The next stronger grade will sometimes form a weakly corm without sending up a sprout, but these corms I have never tried to determine whether or not they would grow or even live over the winter.

Many divisions from the same corm if inclined to be small, which is generally the case, will not bloom the second year, but by their long rest will throw a medium flower spike the third year. A variety which gives a good example of this action is *Madame Monneret*.

The variety *Golden West* which is a very poor producer of cormels is a heavy producer of divisions. In fact all varieties which have come under my observation that are shy producers of cormels seem to turn their attention to the latter method of propagation. Very small divisions of *Golden West* will produce flower spikes.

It depends largely upon the variety whether or not the divisions of an old corm will bloom the second year.

W. W. WILMORE, JR.

Gladiolus "Schwaben."

[*Gandavensis*.]

(*Subject of illustration on front cover.*)

This variety has been on the market for two years, and the more it is known and grown the more it is recognized as being one of the standard commercial varieties.

It was originated by Mr. Wilhelm Pfitzer, Stuttgart, Germany, also the originator of many other prominent varieties such as *Europa*, *Mephisto*, *Negerfurst*, *Dr. Dotter*, *Goldquelle*, etc.

It seems to do well anywhere where a Gladiolus will grow and invariably looks healthy and vigorous, and as tried and grown in Mr. Pfitzer's gardens at Cannstatt and Fellbach, second to none in this respect.

It is, in fact, of such vigorous growth, that a field of it, with its sulphur yellow flowers, carried on extremely strong spikes and with its large, heavy, dark green foliage, is a sight not easily forgotten.

For bedding purposes, owing to its fine

foliage, it has a very decorative effect early in the season.

Strong bulbs usually produce two and three flowering spikes, each throwing out a side branch, so that the flowering period is very long.

It is without doubt one of the very best, largest flowering and most vigorous yellow varieties in commerce.

HISTORY.

It was first shown in August 1910, in Paris as Seedling No. 5456 and at that time received an Award of Merit from the Société Nationale d' Horticulture de France.

Considering the great merits of this variety, however this name did not appear appropriate enough to appeal also to a wider, international circle of flower lovers.

On a subsequent occasion, therefore, in August 1911, whilst a deputation of experts was at Cannstatt inspecting this variety in flower, with a view to bestowing a further Award of Merit, if found worthy of same, which was agreed upon, a suggestion was made to rename it.

It was then that the shorter name of *Schwaben* (Swabia, the land of the Suevi, or what is now practically Wurttemberg) was decided upon from the fact that on that particular day one of Count Zeppelin's latest airships which are built at Friedrichshafen, on Lake Constance the *Schwaben* was cruising about above the gardens of Mr. Pfitzer, where Gladiolus *Schwaben* was growing.

Other awards and prizes have been obtained since, including a Championship in Australia recently, won by a spike with 12 perfect flowers open at the same time.

The 1915 catalogue and price list of W. W. Wilmore, Jr., Wheatridge, Colo., is to hand. In addition to a very choice selection of standard and improved varieties of Gladioli, Mr. Wilmore also lists the hardy perennials, phloxes, cannas, dahlias and irises. The list is a very attractive and concise piece of work and arranged especially for quick reference. Mr. Wilmore will send a copy to anyone on request.

Munsell, & Harvey, Ashtabula, Ohio, have issued their retail and wholesale lists of Gladioli for 1915. Some very choice varieties are listed together with some of the specialties that have been introduced by this firm. *America*, *Mrs. Francis King* and *Independence*, they report as in good supply and make some very favorable offers on these varieties, either separately or in assortments.

THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.
Published Monthly by Madison Cooper, Calcium, New York.

Vol. II.

MARCH, 1915

No. 3



GLADIOLUS—*LA LUNA*.
(For description see page 27.)

To Encourage Amateurs.

A 20TH CENTURY FAIRY TALE FOR THE MODERN GLADIOLUS GROWER.

*"I cannot tell how the truth may be;
I say the tale as 'twas said to me."*

BECAUSE the Amateur worked in an office all day, and was, therefore, unable to mix the paint in the Gladiolus blossoms, he persuaded Mrs. Amateur to do this for him, in the little 16½ x 40 city garden where were also growing tomatoes and a few hills of potatoes.

the potatoes for having to work overtime without extra pay.

Mrs. Amateur thinking it would be a pity to overtax the hardworked delegate for so few potatoes, decided she would set the Hummingbird a stunt on his own ground, and told the Amateur that even-



No. 1.

The seedling whose bulblets "sported," color white. The "sporting" bulblets gave bloom of a pale salmon pink, flecked and streaked with cream white.

The Hummingbird came and sat on the wire fence beside her and said he could do that sort of work much better, and not feeling certain but this was so, she decided to try something he could not do. So she grafted a tomato on one of the potato plants (by inarching) and the tomatoes on it began to ripen while potatoes were also growing.

Now this was going too far for the Hummingbird, and if allowed to go on, the walking delegate of the potato union would be notified to order a strike among



No. 2.

To those interested in odd flowers this picture may be interesting. It's of a cross of Gaudens with a red auratum lily. The spikes are wiry and have to be staked, coming crippled even then mostly. But when one is straight they are quite attractive. The flowers are lavender pink, and if cut when the first flower opens, are pretty and queer for the house and keep longer than *America*.

ing, she had used a little pollen from most everything there was in the garden. Much interested to see the result, he watched for the seed, but there were only three. These he carefully sowed and each grew and bloomed in due time.

One was not worth mentioning; another was some better but "not good enough for a novelty;" the third was number one that appears on this page, and the

Amateur felt very proud, and said, "See what I have done! I will grow many of this high quality variety and become rich and ride in an automobile, and get many prizes at the flower shows."

But, alas! the bulblets "sported" and the "crop failed," and the Amateur's name was just "Dennis!"

No doubt if this beautiful variety had been grown scientifically all this trouble would have been avoided.

But there is still a silver lining to look for.

One of the "sports" is holding its ground and beginning to attract the Hummingbird, who now comes to sit on the dead limb of a cherrytree, and says, "I never told the Delegate a word, but don't you dare tie any paper bags on those flowers!"



No. 3.

Another of our amateur's seedlings, a little deeper shade than *Mrs. Francis King*. Flecked and streaked darker; rich velvety texture.

But the truth must be told. That Hummingbird does come and sit on the limb (in dew time) and abuses the aspiring Amateur some scandalous because she ties bags over the Gladiolus blooms. Either he doesn't like the color or he wants his breakfast. Do you know what color he prefers? Maybe some of the experts may know and be willing to tell the poor Amateur.

La Luna.

(Subject of illustration on front cover.)

This variety was bred by H. H. Groff about the year 1902 and introduced to the American trade by Arthur Cowee of Berlin, N. Y. in the year 1909. Growers will appreciate the appropriate name selected for this variety when it is seen in full bloom. It is a remarkable flower and one with the most pronounced substance. Its value is enhanced by the fact that unlike most durable and heavy-petaled varieties, it blooms freely in water.

The large heavy buds open as a pale yellow, which passes to a pleasing white when the flowers are fully expanded. These are relieved by a small brown marking in the throat.

The form of these flowers is also a rare and valuable feature. They are almost perfectly round and the superior petals being broad are well rounded and overlapping. The whole plant grows slightly over three feet, sturdy and vigorous. The flowers are correctly placed and borne well above the surrounding foliage.

This variety was given a certificate of merit by the Society of American Florists at Dayton, Ohio in 1906. It has also been acknowledged by many experts on Gladioli, to be the best variety of its type ever offered.

Gladioli in Cans or Pots.

In order to secure early bloom it has been recommended to plant bulbs in ordinary six inch flower pots or even in tin cans. If cans are used, punch a few holes in the bottom. To provide drainage in either pots or cans, fill in half an inch of charcoal or gravel and cover with a thin layer of moss or chip dirt. Then fill with a good fibrous potting soil enriched with pulverized cow manure, or better still, pulverized sheep manure. Set the bulb near the surface of the soil and keep in a shady, cool place until growth begins; then give a sunny situation. Care must be taken that they are not allowed to dry out; at the same time, over watering should be avoided. Water heavily at intervals, rather than small quantities daily. The bulbs may be placed as closely together in the pots or cans as they will go with very little soil between them as it is not expected that bulbs used in this way for cut flowers are also to be used to develop new bulbs or produce bulblets.

It is possible that the above suggestions could be used to extend the season in the fall of the year as well as to secure earlier bloom in the spring.

American Gladiolus Society.

The Nomenclature Committee of the American Gladiolus Society has approved the application of Herman H. Baer, New Hyde Park, N. Y., to register the variety *Hyde Park*, and the application of Dr. C. Hoeg, Decorah, Iowa, to register *Jack Frost*, *Pocahontas* and *Zingari*.

Hyde Park (Baer). Color, rosy white, becoming rose Neyron red at the outer edges of the petals. Throat, lemon yellow, slightly shaded deep rose pink, petals feathered same color which is especially noticeable when grown under glass. Stamen filaments white with pink tips. Anthers white with lilac sutures. Bloom, medium size, tube curved, slender, long. Segments unequal, connivent, the upper horizontal and broad, the lower reflexed and narrower. Midseason. Spike, tall, erect, branched, often two spikes per corm. A fair number of flowers per spike. Growth, vigorous and well furnished with medium broad leaves. Corms, medium large. Cormels, prolific. Originated with H. Baer, New Hyde Park, Long Island, N. Y., and introduced in 1914 by Vaughan's Seed Store.

Jack Frost (Hoeg's No. 175). Color, pure white, penciled Tyrian rose upon an amber white throat. Bloom, medium large, tube, nearly straight, stout, short. Segments unequal, connivent, the upper horizontal and broad, the lower reflexed and narrower. Midseason. Spike, medium tall and erect. A fair number of flowers per spike. Growth vigorous and well furnished with very broad leaves. Corms, medium large. An excellent compact, white, of good substance. Originated with Dr. C. Hoeg, Decorah, Iowa.

Pocahontas (Hoeg). Color, amaranth red with a lemon yellow throat, blotched plum violet. Stamen filaments, creamy white. Anthers, violet. Bloom large, tube curved, moderately slender and of medium length. Segments unequal, connivent, the upper horizontal and very broad, the lower reflexed and narrower. Season, early September. Spike, medium tall, erect, not branched, frequently two spikes per corm. A fair number of flowers per spike. Growth good, well furnished with medium broad leaves. Corms, medium large. The color of this variety is excellent, deep and attractive. The bloom is compact and has excellent substance. Originated with Dr. C. Hoeg, Decorah, Iowa.

Zingari (Hoeg's No. 96). Color, rose Neyron red with the edges of the petals lighter, blotch carmine purple with a dash of lemon yellow at the tip of the blotch.

Stamen filaments, white. Anthers, lilac. Bloom, medium size, tube curved, slender, long. Segments, unequal, connivent, the upper horizontal and broad, the lower reflexed and narrower. Mid to late season. Spike, medium short, erect, not branched, often two spikes per corm. A fair number of flowers per spike. Growth, vigorous and well furnished with broad leaves. Corms, medium size. A compact bloom of good substance. An especially good pink variety at the trial grounds. Originated with Dr. C. Hoeg, Decorah, Iowa.

A. C. BEAL, Chairman.

Marking Bulbs for Identification.

Where one has many named varieties the question of keeping them separate and handling them is quite a problem. Paper bags answer but are cumbersome. A good way to keep track where one has only one or two of a variety is to remove the very outside covering, moisten the bulb slightly and then mark with a common indelible pencil, making sure that the pencil is one of the hard kind the marks made with which do not spread out as those made by the softer kind. Bulbs marked before curing do not need moistening. These markings will stay permanent under all conditions. If carefully made they will stay clear through a formaldehyde or other soaking in the spring, and this fall I dug up many so marked that could be plainly read after staying in the ground all summer. This does not seem possible when one considers that it is not the same bulb that you plant but you will find the outside covering of the old bulb you plant covering the new one you dig up in the fall. This to me was a curious fact but it is a fact as can be easily demonstrated. Numbers and names I marked on bulbs last winter were easily read when the new bulbs were dug up this fall. The new bulb grows inside the very outside covering of the old, the latter shrinks in size and the new bulb often exactly fills the space occupied by the old.

F. S. MORTON.

Joe Coleman's new catalogue for 1915, "The Gladiolus Beautiful," is ready for distribution. In addition to the standard varieties Mr. Coleman lists a very fine lot of the new and rare varieties together with some well selected collections, everything priced postpaid. A selected list of dahlias and other good things is included in the catalogue which will doubtless be sent on request by writing to Joe Coleman, Lexington, Ohio.

MRS. AUSTIN'S TALKS FOR
AMATEURS.

PLANTING PLANS.

We have already given a hint in regard to making early plans for the coming season of Gladiolus growing, and it is now time to get right down to business, for a little spare time in planning now will not only save you possibly several days' time later, but means dollars in your pocket as well.

We feel sure that you have watched the bulbs carefully through the winter to be sure that there were no diseased ones, or if having found some that showed those symptoms that you promptly burned them, the same time destroying all culls, keeping for planting only bright clean bulbs.

In getting bulbs ready the first thing to do is to grade them for greatest conven-

may be planted again and will bloom fairly well, but not have much increase of bulblets, and it is generally better to throw them away unless very expensive and even then the small increase will hardly pay for the trouble of growing them. Sometimes choice new varieties can be obtained in only the large sizes. There will be many salable spikes in the grading of one to one and one-half inches.

Last season we described our variety markers, strips one-eighth inch thick and one inch wide, usually of elm wood used for basket handles. These are very good and we will probably use them again this season, but at one of the Gladiolus shows last summer we were shown one that is better. It was of quite heavy zinc cut in strips about the same width as the wooden ones, one end pointed and long enough to go into the ground deeply so as to not pull out easily. The horse weeder may be used over them with good success, for

STREET

White Skinned Bulblets	Test Plot	Plot No. 1 Bulbs 1½ inches and up	Plot No. 2 Bulbs 1 to 1½ inches	Plot No. 3 Bulbs ½ to 1 inch
	Black Bulblets			

ience at the planting time, and although this has been described before, for the benefit of many new beginners it will be well to repeat it. Using wire sorters, grade them into at least three lots besides the bulblets—one-half to one inch in diameter, one to one and one-half inch and one and one-half inch and up. The No. six size one-half inch and less usually are called white skinned bulblets. If you were not a grower last season and are taking your first steps now, buying all your planting stock, it is advisable to purchase each variety in the above sizes, especially the smaller sizes, No. 2 and smaller if possible. The No. 1 size 1½ inch and up will produce large spikes of bloom for shipping and if planted so as to have them early, will in many instances sell for nearly as much as the first cost of the bulbs and, if spikes are not cut too long the bulbs will grow well and give a fair increase of bulblets. These old bulbs

while they will bend freely, perhaps nearly flat to the ground, they will not break. The name or number written on them with lead pencil will not rub off and they may be used for years.

Along with other early plans you should plan to attend the shows, for there are many things to learn there and you will receive helpful hints that you cannot afford to miss. There will be three shows next August—The Gladiolus Society of Ohio will hold one in Cleveland, date not decided yet, The American Gladiolus Society have their annual meeting and trade exhibition in Newport, R. I., and already have the largest premium list ever secured. This is to be followed by a great trade exhibit at Atlantic City, hoping to interest the pleasure seeking public to be found there at that popular resort. Plan to go and plan to take some flowers as people want to see them.

But to return to our garden project.

Make an inventory of the stock on hand that you have to plant, measure the plot or plots (if to be grown in separate fields) of ground you expect to use, decide how you wish to have the rows, whether 15 inches, 28 inches or three feet apart; or if space is limited, a solid bed of four to six inches apart. In this manner you can make an estimate of how much stock you have and know whether you have all the bulbs you need, for if you haven't, now is the time to order them.

Share your pleasure with the public by planting, if possible, where they may be seen from the street. It is a constant advertisement. Plant so that the colors will harmonize and attract the passerby. Have the test plot in close proximity to the large blooming sizes for convenience in crossing the blooms as only the large, strong varieties should be used. Plan the crosses now and make note of them in your field book.

By planting as per our diagram you will have a continuous display. The large sizes bloom first and when those in the No. 1 plot are about through, those in No. 2 will be reaching their prime, and if the No. 3 grading is allowed to bloom, will be best in the fall, at the time the black bulblets should be ready to be harvested.

MRS. A. H. AUSTIN.

A Plea for Flower Shows.

MORE ACTIVITY NEEDED.

BY HENRY YOEUELL.

It is a well-known fact that when one starts to criticise he will "get into hot water," as the saying goes. In spite of the knowledge of the truth of the saying, the writer will take his chances and try and put the blame where it belongs.

No one will dispute the fact that flower shows are the greatest educators we have and it is mainly through them that the public must be taught to love and admire our beautiful flower. It is a lamentable fact that far too many growers, both commercial and amateur, have in the past shown too much apathy regarding them. At many county fairs no prizes are offered for Gladioli and some of the state fairs offer very small premiums. If growers would bestir themselves and show more interest, this condition could be remedied. At a state fair in the west last September not a spike of Gladioli was shown. Just think of it! As Josh Billings would say, "Why is this thus?" Then you hear kicking about the lack of public interest; can you wonder at it?

Comparisons, they tell us, are odious. Let me for a moment call attention to the activity and enthusiasm of the dahlia growers. I venture to say there is not a fair in the country but has prizes for these flowers. At one show orders for 25,000 tubers were taken. We could do the same if we would. Hitherto a few large growers and enthusiastic amateurs have been the mainstay of our shows. We must wake up and get busy and see to it that at every show prizes are offered for Gladioli. Commercial growers could offer a certain amount of bulbs from their catalogs and what is more, they should exhibit. Don't hide your light under a bushel; let others see and enjoy the beautiful flowers you grow.

Far too many are timid about showing, fearing they will be beaten. Others claim they cannot afford to make a display, which is a fallacy for it pays every one who takes part as an exhibitor even if he does not rake in as many dollars as he would like, for he has done his part to stimulate more interest in the Gladiolus.

It is earnestly hoped that the Annual Show of the American Gladiolus Society at Newport next August will be the largest ever held in any country. The list of prizes (which is printed in this issue of *THE MODERN GLADIOLUS GROWER*) is a large one and the many second and third prizes offered will give all a chance of winning.

The new retail catalogue of Perkins-King Co., West Mentor, Ohio, is to hand. The colored illustration of *Princeps* on the front cover page is very striking and the half tones contained in the inside pages are especially good. Very complete descriptions of the varieties for sale by this firm are given, together with some general remarks on flower growing and especially with reference to the Gladiolus. Several collections of exceptional merit are listed at very reasonable prices and growers will do well to have a copy of this catalogue on file.

A catalogue issued by George S. Woodruff, Independence, Iowa, devoted wholly to Gladioli, is to hand. In addition to the standard varieties, Mr. Woodruff lists many of the new and improved varieties and also quotes some wholesale prices for large amateur buyers, in a special supplement. The supplement has an illustration of the variety *Mrs. Frank Pendleton*, which is the best that has been brought to our attention. Mr. Woodruff's catalogue may be had on request.

American Gladiolus Society.

Preliminary Schedule of the Fifth Annual Exhibition of the American Gladiolus Society to be held under the Auspices of the Newport Garden Association and the Newport Horticultural Society at the Casino, Newport, R. I., August 18th and 19th, 1915.

Copies of the Schedule may be had by addressing
H. YOEUELL, Secy., 538 Cedar St., Syracuse, N.Y.

SCHEDULE OF PRIZES.

OPEN CLASS.

GLADIOLUS BLOOMS.

T. A. HAVEMEYER, New York.

No. 1—\$10.00—Best 6 spikes any White Variety.
No. 2— 10.00—Best 6 spikes any Pink or shades of Pink.

No. 3— 10.00—Best 6 spikes any Yellow.
No. 4— 10.00—Best 6 spikes Blue or Lavender.
No. 5— 10.00—Best 6 spikes Red or shades of Red.

No. 6— 10.00—Best six spikes any other color.

W. ATLEE BURPEE & CO., Philadelphia, Pa.

No. 7—\$10.00—Best collection 10 varieties 6 spikes of each.

JACOB THOMANN & SONS, Rochester, N.Y.

No. 8—\$5.00—Best vase of White or light seedling, new.

W. W. WILMORE, Jr., Wheatridge, Colo.

No. 9—\$5.00—Best 6 spikes *Golden West*.

CLARK W. BROWN, Ashland, Mass.

No. 10—\$5.00—Best 3 spikes *Mongolian*.

No. 11— 5.00—Best 3 spikes *A. V. Clifford*.

A. H. AUSTIN & Co., Wayland, Ohio.

No. 12—\$5.00—Best 6 spikes *White Bertrex*.

H. W. KOERNER, Station B, R. F. D. 6, Milwaukee, Wis.

No. 13—\$5.00—Best 12 spikes *American Wonder*.

No. 14— 5.00—Best 12 spikes *Twilight*.

No. 15— 5.00—Best 6 spikes *Blue King*.

E. E. STEWART, Brooklyn, Mich.

	1st	2nd	
No. 16—\$3.00	\$2.00	Best 12 spikes	<i>Black Beauty</i> .
No. 17— 3.00	2.00	Best 12 spikes	<i>Lucille</i> .
No. 18— 3.00	2.00	Best 12 spikes	<i>Minneapolis</i> .
No. 19— 3.00	2.00	Best 12 spikes	<i>Sulphur Queen</i> .
No. 20— 3.00	2.00	Best 12 spikes	<i>Michigan</i> .

H. A. DREER, Chestnut St., Philadelphia, Pa.

No. 21—\$5.00 and \$2.50—Best vase, 5 spikes each *Heliotrope* and *Sulphur King*.

C. BETSCHER, Canal Dover, Ohio.

No. 22—Best display Primulinus blooms, not less than 4 inches across. 1st prize \$6.00. Second prize \$4.00.

CARTER'S TESTED SEEDS, Chamber of Commerce Bldg., Boston, Mass.

No. 23—Best 12 spikes any variety in one vase.

1st prize \$5.00. Second prize \$3.00. Third prize \$2.00.

A. E. KUNDERD, Goshen, Ind.

No. 24—Best collection Kunderd varieties, both plain and ruffled petals. First prize Gold Medal. Second prize Silver Medal. Third prize Bronze Medal.

H. F. MICHELL & Co., 518 Market St., Philadelphia, Pa.

No. 25—Best 25 spikes *Hollandia*. First prize Silver Medal. Second prize Bronze Medal.

L. MERTON GAGE, Natick, Mass.

No. 26—25 bulbs *Mrs. Pendleton* for 6 best spikes of that variety. Second prize 20 bulbs. Third prize 15 bulbs.

PERKINS-KING Co., West Mentor, Ohio.

No. 27—100 bulbs *Panama* for best 20 spikes *Panama*.

No. 28—100 bulbs *Niagara* for best 20 spikes *Niagara*.

AMATEUR AND PRIVATE GARDENER CLASS.

STUMPP & WALTER Co., Barclay St., New York.

No. 40—Silver Cup—Best 10 varieties, 3 spikes each.

H. E. MEADER, Dover, N. H.

No. 41—Cut Glass Vase—Best 3 spikes of seedlings raised by exhibitor.

JOHN LEWIS CHILDS, Flowerfield, N.Y.

No. 42—Best 3 spikes each of *Charmer*, *Dazzler*, *Enchantress*, *Winsome* and *Wild Rose*. First prize \$5.00. Second prize \$3.00. Third prize \$2.00.

H. A. DREER, Chestnut St., Philadelphia, Pa.

No. 43—Best 5 spikes each *Europa* and *Panama*. First prize \$5.00. Second prize \$2.50.

JACOB THOMANN & SONS, Rochester, N.Y.

No. 44—\$5.00—Best 6 spikes any White variety.

CHAMBERLAIN & Co., Wellesley, Mass.

No. 45—\$5.00—Best vase Pink seedling, 5 spikes.

No. 46—\$5.00—Best vase Yellow seedling, 5 spikes.

ARTHUR COWEE, Berlin, N.Y.

No. 47—\$5.00—Best vase Blue variety never before exhibited before the A. G. S.

No. 48—\$5.00—Best vase not less than 10 spikes of *Peace*.

No. 49—\$10.00—Best vase not less than 6 spikes of *War*.

No. 50—\$5.00—Best vase not less than 6 spikes of *Dawn*. (Groff.)

W. W. WILMORE, Jr., Wheatridge, Colo.

No. 51—\$5.00—Best 3 spikes *Golden West*.

No. 52—Best collection, 2 spikes each. First prize \$10.00. Second prize bulbs valued at \$10.00.

L. MERTON GAGE, Natick, Mass.

No. 53—Best 6 named varieties, 3 spikes each. First prize, bulbs valued at \$5.00. Second prize, bulbs valued at \$3.00. Third prize, bulbs valued at \$2.00.

G. S. WOODRUFF, Independence, Iowa.

No. 54—Best 25 spikes *Minnesota*. First prize, bulbs valued at \$5.00. Second prize, bulbs valued at \$2.50.

A. E. KUNDERD, Goshen, Ind.

No. 55—Best collection new Ruffled Types. First prize, Gold Medal. Second prize, Silver Medal. Third prize, Bronze Medal.

H. W. KOERNER, Station B, R. F. D. 6, Milwaukee, Wis.

No. 56—\$5.00—Best 12 spikes *American Wonder*.

No. 57—\$5.00—Best 12 spikes *Twilight Chief*.

No. 58—\$5.00—Best 6 spikes *Blue King*.

G. D. BLACK, Independence, Iowa.

No. 59—Best 25 spikes *Golden King*. 25 bulbs *Blue Bird*, 25 bulbs *Hiawatha*.

VAUGHAN'S SEED STORE, Chicago and New York.

No. 60—Silver Medal—Best 36 spikes from the following varieties: *Hyde Park*, *Chicago White*, *Maymet*, *Mrs. F. King* and *Priniceps*. 12 spikes of each of the selected varieties.

No. 61—\$3.00—For best 12 of any one of the above varieties.

BIDWELL & FOBES, Kinsman, Ohio.

No. 62—Silver Medal—Best 10 spikes *Panama*.

No. 63—Silver Medal—Best 10 spikes *Niagara*.

C. BETSCHER, Canal Dover, Ohio.

No. 64—Best 25 spikes *Primulinus* types, blooms not less than 4 inches, cut from 4 ft. stem. First prize, 5 New *Hemerocallis*, value \$7.50. Second prize, 3 New *Hemerocallis*, value \$4.50. Third prize, 2 New *Hemerocallis*, value \$3.00.

No. 65—Best 25 spikes hybrids or seedling blooms from plants not less than 4 ft. tall. First prize, 5 new *Paeonies*, value \$7.50. Second prize, 3 new *Paeonies*, value \$4.50. Third prize, 2 new *Paeonies*, value \$3.00.

J. M. THORBURN & Co.

No. 66—Silver Cup. (To be designated.)

B. HAMMOND TRACY, Wenham, Mass.

No. 67—Silver Cup. (To be designated.)

CHARLES F. FAIRBANKS, Boston, Mass.

No. 68—Best collection and display. First prize \$30.00. Second prize \$20.00.

AMERICAN GLADIOLUS SOCIETY.

No. 69—Best exhibit of at least 15 varieties, 3 spikes each, correctly named. First prize, Silver Medal. Second prize, Bronze Medal.

THE MODERN GLADIOLUS GROWER, Cal-cium, N.Y.

No. 70—For the best display of Gladiolus blooms not more than 36 spikes. No preference given to named varieties. First prize, Silver Trophy Cup valued at \$15.00. Second prize, A Life

Subscription to THE MODERN GLADIOLUS GROWER. Third Prize, A Five Year Subscription to THE MODERN GLADIOLUS GROWER.

The above list is not complete as not all of the donors of prizes have been heard from in full, and, therefore, a further list of prizes will be published in our April issue.

The Gladiolus Manual.

INTRODUCTION.

In the past few years unusual interest has been taken in the Gladiolus. A large number of articles have been written and published in daily papers, monthly periodicals, magazines, etc. Two books have also been written whose pages are devoted entirely to this flower. Several bulletins have been and are being published by various Gladiolus Societies and one monthly journal.

Still there is territory to be touched upon that has been neglected by the experienced writers on this subject who have taken it for granted that the minor and less important factors are understood by all because they seem simple to them from their years of familiarity. In fact, nearly all the literature that has been written on this subject has been from a wholesale growers' point of view, or from a scientific stand-point, assisting the professional grower in perfecting the genus or adding to his bank account. It is the purpose of this Manual to stimulate an interest and create a deeper love of the Gladiolus in those on whom the professional is so wholly dependent to use this matured product when ready for market.

In order to make this work as interesting as possible to both amateur and professional, the author will resort to both the practical and scientific world to bring under discussion various subjects and methods. Discussion of subjects will be brief and to the point, omitting when possible all technical terms and using the plainest of language to enable the most inexperienced person to grasp the meaning without recourse to reference books.

Criticisms and suggestions are invited on all subjects of wide range in which we will all agree there are differences of opinion. The entire book will be printed in THE MODERN GLADIOLUS GROWER before it is put on the market in book form, excepting various illustrations of wide range and prominent new varieties of recent introduction. Any friendly assistance or suggestions will be greatly appreciated by both THE MODERN GLADIOLUS GROWER and the author.

W. W. WILMORE, JR.

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
PUBLISHED MONTHLY ON THE FIRST OF THE MONTH BY
MADISON COOPER, CALCIUM, N.Y.

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3 years for \$1.00.

OUR MOTTO :
Special favors to none, and a square deal to all.

Canadian and Foreign
Subscription Price
75c. per year

Growers are invited to contribute articles or notes over their own signatures, but the Editor reserves the right to reject anything which in his judgment is not conducive to the general welfare of the business.

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Vol. II.

March, 1915

No. 3

Packing Gladiolus Corms for Shipment.

It seems to be accepted practice among Gladiolus growers in shipping Gladiolus corms to pack them or rather mix them with materials like buckwheat hulls, chaff, "shingle tow," planer chips or shavings, etc. Such directions for packing and shipment as we are able to refer to contain these instructions. To those who receive the bulbs it is certainly a nuisance to pick them out of such materials, and it is doubtful if any good and useful purpose is served in most cases by packing them in this way. It is true that they might stand a greater degree of frost if shipped in cold weather and they might stand greater pressure in shipping, than if tied up in paper only, but neither one of these points should make it necessary or desirable to use mussy materials such as those mentioned in which to pack corms for shipment. There might be some advantage in using porous packing of some kind if quite dry on account of its absorptive qualities to take up the surplus moisture from the bulbs to prevent them from heating or sprouting, but this would not apply except for rather long shipments such as is necessary when importing from Europe.

Ordinarily if packed and tied securely in paper bags containing not more than

50 to 100 corms and these packages packed in wood or corrugated paper boxes, or in barrels, and perhaps the space in the box or barrel around the packages filled with some packing material, it will answer every purpose. If it is desired to make the shipment more frost-proof, space of one to two inches between the exterior of the box or barrel and the packages of bulbs within should be filled with mill shavings or a similar stuff. It is unnecessary to leave space between the papers of corms in the shipping package as penetration of cold from without is all that is necessary to provide against.

If we have overlooked any of the points necessary for successful packing in offering the above suggestions, we would be glad to hear from experienced growers as to their methods. MADISON COOPER.

In our editorial on the subject of "Amateur or Professional?" in February issue we called attention to the definition of the word "amateur" as given by the Royal Horticultural Society of England, with the suggestion that it had all the authority that time could give. Henry Youell, Secretary of the American Gladiolus Society, writes us that the Royal Horticultural Society was organized in 1804 and incorporated in 1809. Surely there are no organizations in this country whose experience could enable them to

pass on a matter of this kind with the authority that may be reasonably assumed by the Royal Horticultural Society.

"To Encourage Amateurs."

The article appearing on page 26 under the above title brings out some very interesting points. While the article is rather brief and not as explicit as it might be, yet some indirect questions are asked which would prove interesting as texts for discussion.

1st. It has always been a question as to whether the Gladiolus might be crossed with other flowers. Here is a photograph proving that it can be done.

2nd. Do bulblets ever sport? Our amateur claims that they do sport and produces evidence to substantiate his claim.

3rd. Whether it is necessary to protect hand-pollinated blooms or not has also been questioned, and one of our largest hybridizers claims that it is not necessary. This subject might be enlarged upon by discussions as to what insects, birds, etc. work on Gladioli, and if color of bloom has any influence.

We will be glad to hear from both amateurs and professionals along this line as there is an opportunity for a large amount of interesting facts to be developed, as well as an opportunity for difference of opinion.

MADISON COOPER.

We are pleased to call attention to the announcement by Mr. W. W. Wilmore, Jr., in another column that he has in preparation a series of articles which will constitute when completed a book to be known as "The Gladiolus Manual." We already have the first chapter in hand entitled "The Gladiolus as a Wild Flower," and as Mr. Wilmore's writings are already so well and favorably known to our readers, it is pretty safe to predict that something interesting and valuable will be the result of his efforts to produce a complete treatise on the subject which we are all so much interested in.

Leaving Gladiolus Bulbs in Earth.

If the Gladiolus bulbs were planted six inches deep last spring, it will be safe to leave them in the earth all winter in sections in the latitude of southern Iowa, and in more southern sections those planted much less in depth may be left in the earth all winter with perfect safety.

For many years these bulbs were all lifted to prevent winter killing, but it has been fully demonstrated that it is practical to leave them in the earth if the bulbs were planted deep enough. Freezing does not kill them, but if left near the surface the freezing will cause them to decay.

When allowed to remain in the earth they multiply more rapidly than if lifted and reset each year, as has been the usual custom with most lovers of this beautiful flower.—*Successful Farming*.

NOTE BY THE EDITOR :

The records above are hardly in keeping with the experience of successful growers, especially in the North. It is not only poor policy to leave Gladioli in the ground over winter on account of their becoming crowded and so produce inferior blooms, but it is only in exceptional seasons that the freezing will not kill the germinating power of the bulb. We print this little article to call attention to the fallacy of the suggestion for average conditions where Gladioli are mostly grown. In the South or in California it might be possible to leave bulbs in the earth, but it would not be good practice under all conditions. Under any circumstances it is certainly not to be recommended to leave Gladiolus corms in the earth from one season to another.

The annual catalogue, "The Glory of the Garden", of Arthur Cowee, Berlin, N. Y. is as usual a very superior thing. The cover illustrates the variety *Peace* in color and this same variety is also illustrated on an inside page. Color illustrations are also given of the varieties *Faust*, *War* and *Dawn* as well as the Silver Trophy Strain, the Glory of the Garden Collection, the Ten Named Varieties Collection and Cowee's Gold Medal Collection. Some interesting illustrations of plantings of Gladioli are also shown together with a view of one of Mr. Cowee's fields at Berlin, N. Y. Brief descriptions of varieties together with prices are given and taken all in all, the catalogue is a very complete thing and should be in the hands of every grower. Mr. Cowee will doubtless send one on request.

WAYSIDE RAMBLINGS.

LICE ON GLADIOLUS CORMS.

TO THE EDITOR:—

I have read every number of your magazine with great pleasure and profit, and have noticed that almost every subject concerning Gladioli has been treated of with the exception of plant lice infecting the corms, so I am writing to give my experience and to ask for help.

Four years ago I bought at a local seed store some badly infected corms and, having planted them, I have raised a pretty good crop of lice every season since. Applying to a local florist for help in the matter, he told me he had never heard of lice on Gladiolus corms, but about that time I saw a statement in a paper that some large growers were having trouble with them, so I wrote to one and he told me to soak the corms in tobacco water. This I did, but in two weeks they were swarming again with lice, although I had pulled off the scales in order to be sure of reaching every part. So I soaked them again, and again got a crop of lice in two weeks. Then for the third time I applied the remedy, and by that time the season had advanced so that I put them in the ground. They were too sick from the treatment to sit up, but they still had lice.

This last season I soaked the corms in Ivory soap water with much better results. However, the scales must be removed in order that the soap solution can get at the lice, and according to writers in your paper this is bad for the bulbs—your pardon, corms.

Can any one suggest an efficient remedy, if possible, a preventive?

C. L. WILLIAMS.

Note—We must confess that the above is entirely new to us. Won't some grower who has had experience tell Mr. Williams what to do.—[Editor.]

COVERING BULBS WITH SAND WHILE IN STORAGE.

Since mailing my new catalogue I have had a number of inquiries as to why I recommend the use of sand for covering Gladiolus bulbs while in storage. This is an old practice which I have followed to some extent and which I believe is not original with me. In storing large quantities of bulbs I rarely follow this method because of its cumbersomeness, but with

small lots such as the average amateur grower would have it is my general practice to use sand.

It will be noted that I speak of covering with sand after the bulbs are well cured. It is important that the bulbs should be well cured before putting the sand on them. Covering in this way keeps the the bulbs from shrinking or shriveling and maintains them in a good plump condition, and besides, it is some protection against freezing during a cold snap should frost penetrate to the place of storage. It is also some protection against too much moisture in a rather damp storage place. Please note that the sand must be thoroughly dry. I use it in the same kind of packages as the bulbs would be stored in, were they not to be covered with sand, and apply only enough to barely cover the bulbs. Covering with sand in this way might have a smothering effect if they were in large bulk and especially if not thoroughly cured. Therefore, it is important that this method should not be used except with comparatively shallow lots.

A. E. KUNDERD.

WINTER GLADIOLUS BLOOM IN FLORIDA.

On my arrival in Florida about Christmas time I found a large planting of my Gladiolus bulbs in full bloom, *Pink Beauty*, *America*, *Baron Hulot*, *Primulinus* hybrids etc., both early and late varieties, all blooming at one time. This planting was made during the last of October and came into bloom before Christmas. Other plantings were made later and are making a nice growth. Nearly 1,000 bulbs were planted in the public park here (Stuart, Fla.) on the 9th and 10th of January and are now, on the 26th of the month, nearly all up, and the most of them four to six inches high.

D. W. C. RUFF.

DO BULBLETS SPORT?

In the current number of THE MODERN GLADIOLUS GROWER the question is asked: "Do Bulblets Sport?"

My experience is that some of them do. Will also state that old bulbs will sometimes change color. Some years since, I had a few bulbs of *Isaac Buchanan*, then considered the best yellow. It was all right for several seasons, and then they all turned to muddy red. Among the seedlings was one pure white. It was carefully marked and the next season there was quite a blush in the throat.

NORMAN COLE.

TIME FROM PLANTING TO BLOSSOMING.

The Gladioli, mentioned in the following list, were all planted between the 26th February and the 4th March, in my garden. My garden is situated at Alverstoke in Hampshire, England. As a rule I do not commence planting before the end of March, but this year so many of the corms had started into growth that I thought they would be better in the ground.

Pink Beauty was really the first to bloom about the middle of June, but for some reason I do not appear to have made a note of the exact date. It is not a flower that I am particularly struck with.

Early Sunrise is a fine flower, but not any earlier than *Halley*. *Harbour Light* produced a very fine spike, but as I had but one corm, I am looking forward next year to see whether it comes as good again.

Apart from *Pink Beauty*, my earliest flower was *Dr. Erwin Ackernecht* and it is a particularly effective variety.

As with Sweet Peas, it will soon be necessary to publish a list of "too much alike" varieties. As an instance I may quote *Marie*, *La Nuit*, *Baron Hulot*. It will be seen by reference to the list that the first was in flower on the 14th July, the second five days later, and the third two days later still. Each variety was from a different grower. I propose to plant my own saved corms next year side by side and watch the result. Last year I picked out from a mixed lot of American obtained corms one flower which I marked "101". This year I grew *Hohenzollern* for the first time, only to find that it was the same as my "101". I do not know when or where *Hohenzollern* made its first appearance.

DATES OF BLOOMING.

Planted between the 26th of Feb. and 4th of Mar.

Variety	Bloomed	Time (about)
Dr. Erwin Ackernecht	July 4	125 days
Early Sunrise	" 5	126 "
Harbour Light	" 5	126 "
Halley	" 5	126 "
Elsie	" 6	127 "
Incontestable	" 6	127 "
Chicago White	" 7	128 "
Mozart	" 8	129 "
Prince of Wales	" 8	129 "
J. Dieulafoy	" 10	131 "
Lily Lehman	" 10	131 "
Peace	" 10	131 "
Salmon Excelsior	" 10	131 "
Panama	" 11	132 "
La Luna	" 12	133 "

Electra	July 13	134 days
Princess Juliana	" 13	134 "
Berkshire	" 14	135 "
Mrs. Wilkinson	" 14	135 "
Marie	" 14	135 "
Mrs. F. Pendleton	" 14	135 "
Oberammergau	" 14	135 "
Empress of India	" 15	136 "
Frau Dora L.	" 15	136 "
Mrs. F. King	" 15	136 "
Mozart	" 16	137 "
Phoebus	" 16	137 "
May	" 17	138 "
Rochester White	" 17	138 "
Dainty	" 18	139 "
Genesis	" 18	139 "
Golden West	" 18	139 "
Michigan	" 18	139 "
Mephistopheles	" 18	139 "
King of Gladioli	" 19	140 "
La Nuit	" 19	140 "
Negro Prince	" 19	140 "
Nezinscott	" 19	140 "
Orion	" 19	140 "
Brilliant	" 20	141 "
Eldorado	" 20	141 "
Afterglow	" 21	142 "
Baron Hulot	" 21	142 "
Salem	" 21	142 "
K. Glory	" 22	143 "
Golden West	" 22	143 "
Blue Jay	" 23	144 "
Karl Lutz	" 23	144 "
Mephisto	" 23	144 "
Miss Wade	" 23	144 "
Marie Therese	" 23	144 "
Zephyr	" 23	144 "
America	" 24	145 "
Mrs. J. M. Kittery	" 24	145 "
Duke of Richmond	" 26	147 "
Frau Herme Seidel	" 26	147 "
Lady F. Cecil	" 26	147 "
Taonic	" 26	147 "
Miss Alice Wood	" 27	148 "
Sea Mouse	" 28	149 "
Goethe	" 29	150 "
Genl. De Nansouby	" 30	151 "
Eugene Sandow	" 31	152 "
Lacordire	" 31	152 "
Cracker Jack	Aug. 4	156 "
Hohenzollern	" 8	160 "
Schwaben	" 10	162 "
Safrano	" 10	162 "
Hohenstaufen	" 15	167 "
War	" 18	170 "

G. C.

GOLDEN WEST AND PACHA.

Can any one advise if *Gladiolus Golden West* is one and the same as *Pacha*? I was under the impression that they were different, but a catalogue of a European grower states they are the same.

W. E. DAVIS, JR.

STATUS OF THE AMATEUR.

As I am an amateur of only a few years' standing, I am very much interested in the articles on the amateur question that have appeared in several numbers of THE MODERN GLADIOLUS GROWER. I have quite a nice collection, my best ones coming from the gardens of B. F. White, of Terryville, Conn.

Now supposing my stock increases so that in a few years I won't have room for it all, and I want some newer kinds, or something different. I do not want to throw nor give away what I have not room for, although a little of giving doesn't hurt anyone. But if I want to sell some so I can buy different stock I do not see how I become a professional for doing so. I wouldn't be a farmer if I sold one or two chickens so I could buy a thoroughbred hen or rooster. What is the difference? Last year I sold a few dozen pansy plants to my friends because I had more than I wanted myself and they wanted what I did not want. I don't see where that makes me a professional. I may never sell another plant. Then what am I? I work in the factory through the day and my flowers and my garden are recreation for me. I do not care to enter the professional class just yet. I am too young in the business. I do not think it fair to call anyone a professional because they sell a few bulbs or plants.

I think, as Mr. Adams says in his article in the November number of THE MODERN GLADIOLUS GROWER, that the professionals are jealous. But why should they be? Haven't they many more advantages than the private grower? What if the small grower does produce a few really fine flowers? They should be glad. The professional man shouldn't worry about the little man. There seems to be plenty of room in this line for those who wish to spread out. The Gladiolus is so easily grown and needs so little real care that anyone who really cares for flowers may have at least a few.

JESSIE CLEVELAND.

CHICKEN MANURE FOR GLADIOLI.

TO THE EDITOR:—

If some of the big Gladiolus growers have had any experience with chicken manure I should be glad to know how to use it. I have quite a large quantity which is dry and pure. I grow Gladioli for the early flower market and any advice along this line would be much appreciated.

J. B. H.

SMALL BULBS VS. BULBLETS—ROOT GROWTH WEAKENS BULBS.

I had an experience with a Holland grower similar to that of Mr. Spencer. Part of my order for small bulbs was filled with bulblets ("cormels") of the same diameter. He claimed that as he did not offer "bulbs" or "bulblets" but simply "gladioli" of certain specified sizes I had no right to complain. I wrote him that the difference was so well understood here that he would be liable in the United States to prosecution for using the mails for fraudulent purposes. Bulblets are always listed separately without regard to size. However little a cormel grows the first season it loses the hard shell and starts immediately the next time it is planted, while the cormel often lies a long time before it is able to burst its shell and often fails entirely even when it is quite large. I knew a lot of large cormels of *Golden King* to lie in the ground a good while without "showing up" and when dug up for examination, they were found intact. The planter peeled them and replanted, when they proceeded to "make good."

The Hollander made another remarkable assertion to the effect that it did no harm for bulbs to make roots in transit "as they have to make roots twice anyway". Now we know that roots made from the substance of the bulb take that much from the bulb and that plants do not make roots naturally without making some use of them and getting something out of the ground for the use of the plant.

GEO. S. WOODRUFF.

ORIGINATORS OF VARIETIES.

On page 10 of THE MODERN GLADIOLUS GROWER for January, the varieties *Faust*, *Intensity* and *Vivid* were from Groff's Seedlings, the first two of which were selected and named by me. The latter was named by Mr. Groff. The varieties *De Nansouty*, *Pacha*, *Senator Volland* and *Eldorado* originated with V. Lemoine & Sons.

ARTHUR COWEE.

An interesting catalogue and price list has been received from the Gardens of Avon, Avon, Ia. A colored cover illustration makes it very attractive and the special collections at low prices make it even more so. In addition to the older and standard sorts many of the new and rare varieties are listed. Directions for culture, care and handling of cut flowers and bulbs are given in brief for the guidance of amateur growers.

Gladiolus Registration.

BY A. C. BEAL, CHAIRMAN COMMITTEE ON NOMENCLATURE.

THE question is sometimes asked, what is the procedure in registering a variety of Gladioli? When a name is sent to the Committee, the first question to be answered is whether the name proposed has been used. To determine this, reference is made to a very complete card catalogue of the varieties introduced since 1870. This card index was prepared from the catalogues of the European and American growers, and gives as far as possible the name of the originator, introducer and the essential part of the available description of the variety. To this we are adding the reference to the illustrations, plates, etc., appearing in gardening journals. It may be urged that many of the names represent varieties that have long since passed away, but an enumeration of the varieties in the catalogues of any year would not reveal all the varieties grown. The Committee has been cautious about allowing the registration of a new variety under a name once used because either in Europe or America amateurs or others may still grow it. There are many suitable names, and this has not proved a serious obstacle.

Having this data some persons may think all one would have to do would be to decide from it whether varieties are new or not. However, variety descriptions given by originators, introducers and growers are faulty. These faults may be classified as follows:

1. The use of superlatives.
2. Incomplete descriptions. Faults are never mentioned.
3. Indefinite or unreliable color descriptions.
4. Lack of emphasis on characters which really constitute the basis for distinction. Characters for which the genus is valuable are emphasized and other plant characters subordinated or omitted.
5. Indefinite or variable terminology used.

For any or all of these reasons, together with the one that no one could write a description that would make a variety clear and distinct to the mind, the Committee has gradually and increasingly insisted on having the variety for test in the trial grounds. While the Society has not made this an absolute rule, it is being observed more and more each year. We are aware that trial grounds at one point under one set of conditions cannot pass

final judgment on the merits of a variety for general culture, but it does enable the Committee to study the varieties firsthand when they cannot travel around the country to do so. All the varieties under trial are at least under the same conditions so that comparisons can be made. If there is wide divergence between the characters of the variety as described by the originator and those noted on the trial grounds, we ask him to send in specimens for comparison, and thus final judgment is arrived at.

Of course, in all such work it is usual that certain varieties are suspected as being identical with others. Information is often sent to the Committee about synonymous varieties. All such information is treated as confidential and the information thus obtained by correspondence is confirmed or disproved by actual testing of the varieties to determine the facts. In a few instances, applications to register are still pending because interested growers will not supply the stock, and the Committee has no funds to buy the stock complained of.

In the case of a variety with more than one name, the card index record establishes the prior name and who sent it out.

It will be seen from the above that the work of the Committee is to avoid confusion by insisting that distinct varieties shall bear distinct names, and to lessen the chances of any stock getting into the trade under a new name when it is identical with or no better than older varieties.

There has been some misapprehension about the work of registration because some have thought that when a seedling was sent to the trial grounds, it would, after a trial, if distinct, be automatically registered. The facts are that ever since the 1913 meeting of the Society a fee of one dollar has been charged for registering varieties. Of course no charge was made when applications were filed previous to the imposition of the rule.

The Committee has never elaborated a set of rules on nomenclature for the reason that, in the writer's opinion, this should be done by the Society of American Florists. He sought, while botanist of that Society, to get a code of rules adopted, and those interested are referred to the Proceedings of the Society of American Florists for 1912 and 1913.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Gladioli on Same Ground Successively.

TO THE EDITOR:—

"I have a fine plot of ground here in the village, leased for a term of years. Can I safely plant my Gladioli in the same soil for three or four years if it is thoroughly manured and plowed both Fall and Spring?"

Answer:—On general principles, it is considered better for any crop not to plant or grow it continuously for many years on the same ground. There are several reasons, and apparently good ones, for this. Foremost among these appears the exhaustion of the soil by continued cropping, or, rather, the exhaustion in the soil of the special elements needful for the well-being of that particular crop. For it is well known that different crops seem to require and draw upon the supply of plant-food in the soil for a special diet, as it were, a combination of elements different from others, and while we are led to believe that the three leading constituents of plant-food = nitrogen, phosphoric acid and potash, will support almost any crop, yet it does sometimes seem as though some plants craved something more than just the "bread and butter" of life and will not do their best without. Perhaps it is possible to supply these needed elements while growing the same crop continuously, but of this I am not sure. I know that with a short rotation, including a crop of clover plowed down, I have been able in ordinary farming to obtain both increased yield and an improved soil. I doubt if I could have done this without rotation, because of the second reason which is this: Without the intervention of a clover crop of some kind to be turned down and incorporated in the soil, the latter speedily becomes compact, solid, and usually sour. This tendency can, it is true, be largely overcome by drainage and a large use of stable manure with some lime to keep it sweet. A lack of humus in the soil is a widespread condition, and the difficulty in this particular case is to supply it when growing a crop

so uncongenial to fresh manure, and which also occupies the ground for so long a period. Often there seems to be no time in which the work of soil improvement can be done, for freezing weather often follows close even if it does not break in upon the harvesting of the bulbs. My plan, since coming into city limits where the opportunity for rotation seems denied, is to apply a heavy coat of stable manure in the Fall, plowing it under when the weather and work will permit.

Another reason for rotation is, as many think, the increased freedom from disease thereby gained. I feel sure that the disease now causing growers so much anxiety is of bacterial nature, and that the infection remains in the soil, at least for some time, as well as in or on the bulbs. Hence a new location each year would avoid one source of infection. This is, however, only half the story, and only a temporary relief at best, though it may help to alleviate a threatening condition until some positive remedial measure be discovered. I might say that I am certain as the result of experiments, notwithstanding the conclusion of the Cornell investigations, that a thorough treatment with a formaldehyde solution will eradicate the disease from planting stock, and if the soil be not infected, will enable us to grow clean, healthy bulbs. I am aware that the conclusion from the investigation referred to is that the mycelium of the fungoid growth which produces the disease penetrates throughout the entire substance of the bulb, and that therefore no amount of external application can be of any avail. In regard to this I may offer my conviction from actual experiments both of myself and others, that when the bulbs are subjected to a thorough and long-continued immersion in solution, there is such a complete destruction of the exterior surface mycelium as to prevent any further development of it in the way of growth. We know that in the case of any plant if all the buds, actual and dormant, are destroyed there will be no subsequent growth. A potato with all the

eyes cut out is worthless for seed, and I believe the same principle holds good here. While it may be true that the entire substance of the bulb is interpenetrated by the mycelium, is it not also true that this internal growth is absolutely destitute, alone, of any germinative or reproductive power? It is practically the root-system of the parasite, but if destitute of bud-cells, as it probably is, it is powerless to perpetuate itself, or to harm the future crop. At any rate the exterior surface growth is so destroyed as to remove its power for evil.

I would say then that planting continuously without rotation is practicable though not preferable. Conditions necessary to its success may be provided, and then it will be satisfactory. Otherwise, it is better to practise rotation.

W. A. CHRISTY.

Bulblets or Cormlets?

TO THE EDITOR:—

I have noticed for a long time that growers of Gladioli call the little cormlets "bulblets."

Now my understanding is that the Gladiolus is a corm and not a bulb, and even if it is a bulb then a bulblet is something that grows above the ground in the axil of a leaf or at the top of a stem, for instance, onion sets are bulblets.

If the Gladiolus is a bulb instead of a corm then the little cormlets are bulbels and not bulblets, at least this is my opinion. Am I right? If not kindly set me right and greatly oblige.

J. A. G.

Answer:—There is no doubt but what the mature Gladiolus is a corm and not a bulb and therefore the little corms would be cormlets, or as some prefer to call them cormels. Many people in the trade who are versed with reference to proper terms, use the terms bulbs and bulblets, simply because of usage. Although it is rather bad practice to do as others do because it is easier than it is to do things right, yet this is very often the case, and certainly those who have had experience in doing "missionary work" in straightening out various matters to have them improved and handled as they should be, know well enough that the effort and time required hardly seems worth the result. Further than this, some people ridicule efforts to pronounce words as they should be pronounced and apply correct terms rather than those that have been established by a long period of use. It is doubtless this ridicule which keeps many from employing the right names. The pronunciation of the word Gladiolus is a good instance of this. While the correct pronunciation is not the least in

doubt, yet many stick to the old pronunciation because it is time honored and because it seems easier to them.

MADISON COOPER.

Color of Bulbs and Color of Bloom.

TO THE EDITOR:—

Is it possible to determine with any degree of accuracy the shade of bloom that Gladiolus bulbs will produce by close examination of the bulb? Will light colored bulbs likely produce light colored blooms, viz: white, yellow, etc., and will the darker colored bulbs produce dark blooms, etc.? Kindly answer in THE MODERN GLADIOLUS GROWER as I am somewhat of a novice in growing of Gladioli.

J. A. G.

Answer:—Although we are able, from years of experience in handling Gladiolus bulbs, to sort out from mixtures many named varieties by reason of color of bulb and other characteristics, I believe it is quite impossible to determine with any degree of accuracy the shade of bloom bulbs of certain colors will produce. From our experience we find that red shades produce a larger proportion of yellow bulbs, light, medium and dark, (about 50%), about 25% of red bulbs, and about 25% divided equally between white, flesh and pink. Pink shades rarely produce red bulbs, the shades of yellow predominating about 50%, the balance being divided between pink and white bulbs, the latter predominating. White shades produce about equal quantities of white and yellow bulbs, a smaller proportion of pink bulbs, and a smaller proportion of red bulbs. Yellow shades rarely produce other than yellow and pink bulbs. Blue shades rarely produce other than yellow or white bulbs.

You will note from the above, which is a careful record of investigations made that it would be quite impossible to determine the color of flower from the color of the bulb.

ARTHUR COWEE.

Clark W. Brown, Ashland, Mass., has sent us his 1915 catalogue and price list of Gladioli and dahlia bulbs. The catalogue is nicely arranged with the varieties alphabetically placed so that they are quickly referred to. Mr. Brown makes special mention of his *Mongolian*, one of the Kunderd varieties. In addition to Gladioli and dahlias several other good things are given in the catalogue and some very well selected assortments are listed at attractive prices.

New subscribers may secure THE MODERN GLADIOLUS GROWER for 1914, Volume I, with index, by remitting 50c. Volume I bound, with index, costs but \$1 postpaid.

Gladiolus Diseases.

BY DONALD REDDICK,

Professor of Plant Pathology, Cornell University,
Ithaca, N.Y.

The short note published in the February issue on Gladiolus diseases has called forth a generous response and it has occurred to me that your readers may be interested in the way in which our work is done.

Four years ago we received notice from Albany that the Legislature had commissioned us to "investigate the diseases of the Gladiolus and other bulbous plants" and that an appropriation had been made for maintaining the work. At that time we did not know, and we know now only by inference, who was responsible for securing the appropriation. Before that time, however, Mr. E. Wallace had made a study of the hard rot disease which is so common and so wide-spread both in America and in Europe and was all but ready to accept the "physical disintegration" theory suggested by Mr. Groff; when near the close of his course he discovered an exceedingly minute parasitic fungus working in the tissue. Since then Mr. Massey has proved that this fungus and it alone is responsible for the hard rot of the corms.

It was natural to assume that the new corms were affected by the fungus growing up through the base, but after very careful study we are convinced that this does not happen. On the contrary the spots are as apt to start on the upper surface and work down.

When this fact was demonstrated, it then appeared that the fungus must winter in the soil and this seems to be the opinion of growers who have tried to use the same soil repeatedly for Gladioli. An experiment was therefore planned to determine whether a treated soil of some sort might not be used to advantage. Land which had grown a crop the previous year and in which the disease was present was selected and a large number of substances used in soil disinfection work were applied in varying amounts. In no case were results obtained which would warrant the adoption on a large scale of any of the treatments, although some few seemed worthy of further tests.

With this possibility more or less eliminated, some attention was given to corm treatments with the idea of being able to kill the fungus in the tissue without injury to the corm. If this were possible these corms could then be planted in soil in which Gladioli had never been grown, thus furnishing a method of obtaining a

disease-free crop. Various chemicals, hot water, dry heat, etc., were tried, none of which gave positive results although some were indicative of being worthy of further experimentation.

The one possibility, as indicated by our experiments, that the growers can absolutely rely upon to unfailingly produce sound offsprings is the selection and planting of healthy corms in soil in which Gladioli have never been grown. This requires a rigid selection of healthy corms. None should be used which, after the husks have been removed, have any lesions what-so-ever suspicious of disease. Many selected corms grown by us for the past three years in soil which had grown no previous crops for some twenty years have given offsprings without a trace of disease.

Obviously experiments along the lines of control must be carried out under conditions actually realized by the ordinary grower. Mr. Arthur Cowee's desire to co-operate with us in this work has led to the establishment of a field laboratory in connection with his farm at Berlin, N. Y., where his studio has been turned over to us for further laboratory work, together with land for all necessary field trials. The possibilities of control are far from being exhausted, and much progress is expected during the coming season.

Paul L. Ward, Hillsdale, Mich., will send his annual list of "good things" for house, lawn and garden on request. Mr. Ward's good things include not only ornamentals like Gladioli, pansies, phlox, etc., but also the useful things like vegetable plants and thoroughbred poultry.

CLASSIFIED ADVERTISING.

Growers having surplus stock for sale will find this department effective in disposing of it. Five lines (about forty words) \$1.00 per insertion. Additional lines 15c. each.

MRS. FRANK PENDLETON. The very finest Gladioli, only \$2.50 per dozen bulbs, postpaid. Be sure and send for catalogue of all the best varieties, Gladioli, Dahlias, Roses, Phlox, Iris, Fruits, Shrubs, Peonies, etc., to M. S. PERKINS, Danvers, Mass.

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In Dahlias we have large stocks of Sylvia, Jack Rose, Red Husar, Prof. Mansfield, Hallock, etc. Let us know your wants in our line.

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Special cash raising offer

of Mrs. Frank Pendleton bulbs, in all sizes. Also a small lot of

"Myrtle"

in all sizes.

You can find no better investment in Gladioli at the present time than to stock up with these two varieties before they become plentiful. There are no better sorts.

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THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.

Published Monthly by Madison Cooper, Calcium, New York.

Vol. II.

APRIL, 1915

No. 4



GLADIOLUS—MINNESOTA.

(For description see page 50.)

The Gladiolus Manual.

BY W. W. WILMORE, JR.

CHAPTER I.

The Gladiolus as a Wild Flower.

THE eastern hemisphere is acknowledged to be the native home of the *Gladiolus*; at least we have no recorded species from other countries. About 150 species comprise this family according to the Century Dictionary and Encyclopedia. Other authorities give from 90 to 100 species, found largely in Southern Africa (Cape of Good Hope). Ranging North, they form the chief mountainous vegetation of this region. Other forms are found in Southern Europe, Asia Minor and one species on the Isle of Wight, England. This latter species, *illyricus*, is by some authorities regarded as being a variety of the well known *G. communis*, a species found in Southern Europe, cultivated in the early part of the 16th Century.

The *Gladiolus* derives its name from the latin word *gladius*, meaning a sword, from which came the word *gladiator* (sword-man) hence the word *gladiolus* (little sword or sword-plant). A wide discussion has arisen as to the correct pronunciation of *Gladiolus*. It was first known as Glad'-ē-ō-la, next as Glad'-ē-ō-lus. We then took on airs and thought it should be pronounced Gla-di'-ō-lus. As some are quick to take up new fads and others slow to grasp them, there immediately arose a heated discussion among the best authorities. Which is correct? This you will have to decide for yourself. Personally, when using the word in singular form, the writer prefers the pronunciation as is used in "gladiator," but in this case the plural form should be *Gladioluses* which is not correct according to the plural spelling of the day which is *Gladioli*. As common practice fixes and establishes the pronunciation of all words, I would say that the old way and the new one are both correct, for example the word "either" which Webster gives as ē-ther or i-ther, both forms being in common use.

The *Gladiolus* belongs to the natural order, *Iridaceæ* being monocotyledonous (one seed-leaf) perennial plants or herbs from corms, bulbs, or root-stocks with two ranked equitant leaves (overlapping each other in a parallel manner.) Flowers perfect and showy, tube of the perianth pressing close or growing to the ovary (seed-pod) which is enclosed in spathe-

like bracts (abnormal leaves,) three stamens with anthers turned outward. (The stamens are the male organs of the flower, it consists of a stalk called the filament which bears the anther a tube of pasty substance which, when ripe, bursts, shedding a powder called pollen, causing fertilization of the ovules or rudimentary seeds contained in the ovary). Three-parted stigmas, often petal-like, (the stigma is the top portion of the pistil, the female organ of the flower, consisting of three parts, the stigma, style and ovary, the style being the connection between the stigma and ovary. The stigma is moist and pubescent in order that the pollen grains may adhere when they come in contact with one another). Seed pods or ovaries three-celled and many seeded.

This family comprises many of our cultivated plants such as *Iris*, *Watsonias*, *Montbredias*, *Tritonias*, *Crocus*, *Freeseas*, etc.

A certain species of *Gladioli* is, as a rule, named after or by the person that first discovered or recorded it, giving it a name of significance pertaining to some important factor or notable quality in its appearance.

Unlike many other wild flowers the *Gladiolus* has very few attractive species. We rarely if ever see the original species except in botanical collections. The forms that come under our notice are hybrid or cross-breed forms of the species. In fact some of the wild members of the family are very unattractive and would not be recognized by many of us as belonging to the race.

Nature has perfected some plants to a state that cannot be improved upon by the human hand. Of this class perhaps the lily is the most perfect. Not so, however, with the *Gladiolus*. The careful and scientific methods used in the crossing of *Gladioli* have been such that it is a rare case when the parents can be traced through the offspring other than by records, so wonderful is the change.

It is an accepted fact that plant and animal life have two vital factors, one dominant or prominent while the other is recessive or hidden. In the wild species of *Gladioli* the inferior factor is dominating, while the major qualities are hidden. Not so, however, with the lily. In this case

the opposite is true, the more crossing and breeding that is done with this flower the weaker it becomes in most cases. Therefore, it is only conjecture as to the limit of success that can be attained in the crossing and breeding of Gladioli. It is my opinion that there will never come a time when the wild species can be rejected, as there are many hidden possibilities in the wild race which, when brought to notice, will surprise the expert and be marvelled at by others.

It is the universal idea that we cross and breed in order to get something new. This is a mistaken idea. Remember the old adage, "nothing is new under the sun." We do this work to bring out that which we already have. This subject will be taken up again under Chapter XI, Seed Fertilization.

Another important fact regarding the Gladiolus is that it is the only plant that the writer can call to mind that contains the colors of the rainbow, (green, of course, is seldom found in the flower), nearly all are found in the wild species, which range from the most brilliant scarlets to pure white, from clear yellow to purple, with intermediate colors of orange, salmon, blush, pink, and on to the reds and browns.

It will be remembered that all wild species of Gladioli as well as other plants reproduce themselves from seed as well as by divisions which is the opposite result obtained from seedlings of a variety of a species. In fact it is a very difficult task in some cases to cross two distinct species, especially if they be widely separated, and in these extreme cases the offspring becomes a mule (infertile in seed production) even though the seed is formed and of sound appearance. Cases of this kind constitute a true hybrid. This statement is not made to discuss hybridizing but to show how nature has provided for her species and sub-species to keep them from mixing which would in the end terminate into a weakening of the race, and cause it to become extinct, as hybrids often inherit the evil and undesirable qualities of both parents.

Other methods employed by nature to make the species respect her laws are by giving them different blooming seasons, (this will account largely for the early, midsummer and late varieties of our present day varieties.) She has placed them in different parts of the globe. She has made some to relish sunny locations on rocky hillsides while others delight in rich, deep loam, in shady localities. In some cases the mechanism of the flower differs from that of others, some being

dependent upon their neighbor for pollination while others are self fertilizing. Many other ways has this wise Queen of keeping her subjects under discipline.

We have in the Gladioli several half-hardy species. Some will stand moderate winters, others slight touches of frost, while others are very tender. We may account for these varied differences as long endurance under climatical changes. It is true that climates are continually changing, although it be very slight; perhaps not noticeable in a life time. Still, ages leave the trace. We might, for argument's sake, take a tender species growing in a warm climate which is gradually changing to a cooler temperature. It is only natural to suppose that the plant will become accustomed to its surroundings and become hardier in texture as the years go by and in time be able to stand several degrees of frost. This, however, is only conjecture although we know that in our garden varieties which have originated from many various species and climates are still varied in texture. If any readers have been as unfortunate as the writer to have several degrees of frost enter their winter quarters of Gladioli, they will remember that some varieties were completely destroyed while others were only slightly injured if any.

The Gladiolus in its wild state is dependent upon the wind for distribution of seed. Each seed is equipped with a wing which, when caught by the breeze, is hurled along and dropped into some favorable crack or crevice where it is covered by dust, or, if in the rainy season, is buried in mud, which soon germinates the tiny seed which soon terminates into an established plant and in time a clump of corms.

In the native home of the Gladiolus the growing season is during the rainy portion of the year, the dormant season being during the dry period. They bury themselves from $1\frac{1}{2}$ to $2\frac{1}{2}$ inches in depth according to the size of the corm which ranges from that of an ordinary garden pea to that of an English-walnut.

The Gladiolus, unlike many plants, is not an animal food; in fact, few insects are injurious to it. One species, however, (*edulis*) is roasted and eaten by the natives of the Cape of Good Hope, as we roast the chestnut in America.

Little is to be said further regarding this plant in its native state that cannot be handled to better advantage in advanced chapters.

(Continued next month, Chapter II. "Gladiolus Species.")

American Gladiolus Society.

Additions and corrections to the Preliminary Schedule of the Fifth Annual Exhibition of the Society as given in the March issue of "The Modern Gladiolus Grower."

ADDITIONAL PRIZES.

OPEN CLASS.

CHARLES F. FAIRBANKS, Boston, Mass.

No. 29—\$15.00—first; \$7.50, second; \$2.50, third—
For best seedling never before exhibited.
Not less than three spikes.

THE NEWPORT HORTICULTURAL SOCIETY.

No. 30—\$12.00, first; \$8.00, second; \$4.00, third—
Best collection 6 varieties, 6 vases, 12 spikes
to a vase.

No. 31—\$5.00, first; \$3.00, second; \$2.00, third—
Best vase of Gladioli artistically arranged,
suitable for the decoration of drawing room
or parlor.

No. 32—\$6.00, first; \$4.00, second—Best basket or
hamper artistically arranged.

No. 33—\$5.00, first; \$3.00, second—Best center
piece of Gladioli.

RAYMOND W. SWETT, Stoughton, Mass.

No. 34—Bulbs valued at \$5.00, first; Bulbs valued
at \$3.00, second; Bulbs valued at \$2.00, third—
For best 10 spikes each *Blue Jay*, *Europa*, *Pan-*
ama, *Niagara* and *War*.

AMATEUR AND PRIVATE GARDENER CLASS.

H. YOELE, Syracuse, N.Y.

No. 71—\$3.00, first; \$2.00, second; \$1.00, third—
For best 3 spikes any named variety.

The Gladiolus was in full bloom this year in July and giving cut flowers for the house and the richest outdoor show of color, since the tulips went out of bloom. The *America* is the most popular of all, and our local florist is buying our surplus of this kind, even taking the trouble to come out and cut them himself. The *America* is not only the most popular, but perhaps the easiest of all to grow, extremely vigorous and multiplies with great rapidity. In selecting a variety of the Gladiolus, it should certainly have first place. *Peace*, a seedling of the *America*, is much lighter colored and commonly classed with the white varieties, and is another vigorous, hardy kind that will give the best of satisfaction. A unique thing, both in color and habit, is

THE NEWPORT HORTICULTURAL SOCIETY.

	1st	2d	3d	
No. 72—	\$3.00	\$2.00	\$1.00—	Best 6 spikes White, named.
No. 73—	3.00	2.00	1.00—	Best 6 spikes Dark Red, named.
No. 74—	3.00	2.00	1.00—	Best 6 spikes Light Red, named.
No. 75—	3.00	2.00	1.00—	Best 6 spikes Deep Pink, named.
No. 76—	3.00	2.00	1.00—	Best 6 spikes Light Pink, named.
No. 77—	3.00	2.00	1.00—	Best 6 spikes Violet or Blue.
No. 78—	3.00	2.00	1.00—	Best 6 spikes, any color distinct from above.

JOHN SCHEEPERS & CO., INC.

No. 79—Silver Cup—Best collection of Gladioli by a private gardener.

MUNSELL & HARVEY, Ashtabula, Ohio.

No. 80—25 Bulbs *Hazel Harvey*—For best 10 spikes any Red variety.

W. E. FRYER, Mantorville, Minn.

No. 81—20 Bulbs *Mrs. W. E. Fryer*, First; 15 Bulbs *Mrs. W. E. Fryer*, second—For 6 best spikes of that variety.

RAYMOND W. SWETT, Stoughton, Mass.

No. 82—Bulbs valued at \$5.00, first; Bulbs valued at \$3.00, second; Bulbs valued at \$2.00, third—
For best 6 spikes each *Blue Jay*, *Europa*, *Pan-*
ama, *Niagara* and *War*.

CORRECTIONS.

Vaughan's Prize No. 60—*Margaret* for *Maymet*.
Brown's Prize No. 11—A. W. Clifford for A. V. Clifford.

Add to Betschers No. 22—Not less than 25 spikes.

found in the *Baron Hulot*, a rich purple, of rather small size, but making a surprisingly fine bouquet when used alone or in combination with the white. The first really pure white Gladiolus that we have ever grown is the *Europa*, opening up its petals and surprising us with its purity and grace. It is a new variety and quite expensive. While the Gladiolus growers were striving for years to get a pure white Gladiolus, they were inclined to call those kinds white that approached the nearest to it. Now that they have pure whites, it would seem time to class the *Augusta*, *Peace* and *Chicago* as White and several others where they belong, that is, among the light colored kinds.

CLARENCE WEDGE in
The Farmer.

MRS. AUSTIN'S TALKS FOR
AMATEURS.

A DAY IN THE SUGAR CAMP.

One of those long, balmy spring days that mark the closing of the sugar, or, perhaps, we should say, the syrup making season, and the awakening of the brighter spring life in the woods.

Walking over soft, cushiony brown leaves and patches of emerald moss, or riding through wet gullies and over little rivulets, clinging to the "gathering tank" lest we be thrown from the sled as it strikes rough roots, we go with the sap gatherer on his trip through the maple wood. The trusty team halting at each tree shows intelligence and understanding of its duties.

The honey bees cluster around the trees as if they, too, know it is the last gathering of nature's gift of sweet. On we go on our circling trip noting with some surprise and increasing concern the devastation on every side. Stumps and decaying branches put us in mind of the carnage of a battlefield. Gone with the tree life is also much of bird life which cannot exist without the coverts and sheltering thickets. Our attention has recently been called to the gravity of this situation by one who is doing a great work in the restoration of birds and trees, and who states that the entire loss of our insectivorous birds would surely be followed in time by loss of all plants (destroyed by insects) and result in the starvation of animal life, including man.

We have at various times mentioned different crops that might be grown with the Gladiolus as sidelines, and we now advise and urge the necessity of growing a crop of birds. We may do this by protecting them, studying their needs and destroying their enemies, the chief of which is the English sparrow.

We are again in sight of the sugar house with its blue smoke curling upward. The sled is left where the sap may be conveniently drawn into the great storage tank. The team is fed, and preparations for our dinner are begun.

The modern evaporator with its closed front takes away much of the romance of the open camp-fire effect of former years, but we can still boil eggs in the sap, and by opening the doors and raking out the coals, broil thick, juicy slices of home cured ham, and roast potatoes in the ashes. This supplemented with a basket of good things from the house makes a meal fit for Royalty.

The sap is kept boiling briskly and the syrup in the finishing pan will soon be ready to draw off.

A kettle filled with the new hot syrup is hung gipsy fashion over fresh coals, and after a few minutes it is time for saucers and spoons. They tell us the old-time wooden sugar paddles are out of fashion in sugar camps now, but maple cream tastes as good as ever.

In the sunny afternoon we ramble in the more open woods finding early flowers—spring beauties and hepaticas, which we gather as trophies of our trip.

Here in the open we see more plainly the swelling buds, in their various shades from deep mahogany to palest green in ever changing and beautiful combinations. Nature is planning her color schemes for the coming season, and with her for our teacher we should also plan for our season of bright color. The browns and grays and white of winter are gone by; we are at the entrance of a world of brilliancy.

Few people know that the Gladiolus now has almost as great a range of color as it is possible to have. A lady who visited our field last summer had not been able to carry out a color scheme in connection with her business because she was unable to find flowers in the shades desired, and was greatly pleased to find the Gladiolus in the tint she wished. So graceful and decorative too, the old time stiffness gone.

Have we all the varieties and new colors selected that we need? In mother's cosy sitting room she will want something to harmonize with the soft lavender draperies. Surely no need to ask if you have enough *America* for her table.

What about the dining room, perhaps you have a corner cupboard with the Old Blue of Wedgewood and Adams. The beautiful *Badenia* and *Baron Hulot* combined with the soft yellow of *Canary Bird* or the paler *Niagara* have a place there.

For the boudoir with touches of old rose those beautiful mauve Gladioli add a deeper tinge.

Then there are colors needed for evening use under electric light for special decorations, but whether it be for day or evening you can have the color you want if you plan for it now.

MRS. A. H. AUSTIN.

If you want to get started with Gladioli at low cost buy bulblets. They will grow into blooming size in a couple of years anyway, and some varieties bloom freely from bulblets. The second year you will get a lot of bloom.

Forcing Gladioli in Cold Frames.

By S. E. SPENCER.

My first attempt at raising Gladioli in cold frames was fairly successful. During a January thaw I put up the sideboards, banked them up and spaded in a good dressing of stable manure. March 25th I began planting bulbs, using one hundred to a sash, rows six inches apart and 17 bulbs in each row the long way of the sash. Before they came up I set small tomato plants between the rows and they stayed there until May 20th, when they were set out in the field. Any small, quick growing plants could be used in this way, such as radish, cabbage, lettuce, etc.

The sashes were opened for ventilation each day as the weather became warmer, and removed on rainy days, if the beds seemed dry. I do not recall the date they were taken off for good, probably about May 10. By this time the green spears were pushing up against the glass and there was a prospect of early buds. Then the sides were taken away for greater convenience in cultivating, and the path between the beds leveled down. It was soon evident that the bulbs were not making as rapid growth as was expected, owing to lack of nourishment. A row of bulbs in the field will send out feeding rootlets for a space of two feet on each side and bulbs planted as these were, four by six inches apart, needed an extra supply of plant food. This was given twice a week after the sash were taken off, in the form of dilute liquid sheep manure, nitrate of soda in solution, half a handful in a gallon of water, or a sprinkling of sheep manure scratched in, and a light sprinkling of garden phosphate just before a rain. *Pink Beauty* bloomed first and a small lot were sent to market June 30th. The bulk of the planting was *Americas*. These came about ten days later and by the middle of July I was shipping regularly and getting from five to eight cents per spike.

Only three-fourths of the bulbs blossomed owing to the close planting and lack of plant food. The soil was poor and was not in a fit condition for such a crop, but the most of the blooms were in the market ahead of the field crop and sold at a very good price.

My second trial was a failure for two reasons. I located my beds on an incline where the glass would pitch to the south and built seven frames thirty feet long, but unfortunately one end was high, and I did not realize that the warm air would rise to the highest part of the frame leaving the lower part cold. In consequence

of this blunder three-fourths of the bulbs were very slow in starting, and as I was ten days late in planting on account of cold, stormy weather, the blossoms came along at the same time as the early field crop.

This spring I intend to run a hot water pipe through the beds and get the bulbs started a few days earlier. I think a hot bed with about six inches of hot horse manure could be used this way and this would furnish some of the necessary fertilizer but have not tried it on account of the difficulty in getting the manure at the right time. For the back of the frame use boards fifteen inches wide and on the front seven inches wide. This gives the glass a pitch of eight inches on level ground.

Gladiolus Lantern Lecture

by Mr. Morton.

The work of Frank S. Morton of Portland, Me. in attracting interest to the Gladiolus, is worthy of emulation by many other people. Mr. Morton recently appeared before a public meeting of the Portland Society of Natural History which is held on the third Monday of each month and at which some paper on a scientific subject is given. Mr. Morton's paper was on the cross breeding of flowers, with Gladioli as the special subject. Mr. Morton was fortunate in being able to show a set of lantern slides illustrating his work in the cross breeding of Gladioli, by removing the pollen and changing it from one flower to another by artificial methods instead of depending on the humming birds, bees and other natural means. A large and enthusiastic audience listened to Mr. Morton's interesting talk.

"Geo. Paul" and "Faust."

I would like to have some one who has grown *Geo. Paul* and *Faust*, both as listed and sold by Mr. Cowee, and who has also grown the variety *Faust* sold by Holland growers, state how these varieties compared and differed. I notice that *Geo. Paul* is not listed in the Dutch catalogues, and, having bought some young bulbs of *Faust* from a Hillegom grower, I found them to be, as far as I could see, identical with *Geo. Paul* as sold in the United States. I would state that I have not seen Mr. Cowee's *Faust*.

GEO. S. WOODRUFF.

The premium list of the American Gladiolus Society show at Newport in August will be the most complete schedule ever presented.

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
PUBLISHED MONTHLY ON THE FIRST OF THE MONTH BY
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Cause of Low Prices of Gladioli.

A prominent firm of bulb growers in Holland writes that the common impression among American growers that the cause of low prices for Holland grown bulbs this year is because the Holland growers cannot send their products to the European countries, is very largely erroneous. While the countries at war have taken a part of the Holland grown bulbs, yet it is America that has always been the best customer of the Holland bulb growers.

It is further stated that many of the Holland growers who have in more prosperous times invested heavily in the newer varieties of Gladioli are now doing everything they can to sell stock even at low figures as the cash is badly needed. The low prices have discouraged many of the smaller growers who are destroying their bulblets and have no idea of increasing their stock. Many of those who realize the possibility of a better market in the future do not have the capital to buy stock at present. It is stated that there will probably be fewer Gladioli exported from Holland next season.

This information will be consoling to American growers who have suffered heavily this year by the cutting of prices. Doubtless the low prices have not been altogether because of war conditions, as

present financial conditions as experienced in this country are worldwide in extent, and shortness of money means short sales of stock for cut flowers or ornamental planting. It is, we believe, a time for conservatism and those who are in the business should build up their stocks of high class varieties and not get discouraged because prices are now low. These things regulate themselves and certainly the increasing popularity of the Gladiolus is going to operate to cause largely increased demand within the next few years.

Growing from Bulblets.

The low cost in actual money invested at which one can get started in growing Gladioli from bulblets is quite astonishing. Bulblets may be had all the way from 25c. to 30c. per thousand to 75c. or \$1.00 for the standard named varieties, and if bought by the peck at even much lower prices.

The low investment way to get started growing Gladioli is to buy bulblets or some small planting stock up to one-half inch which can be had at prices only a little higher. A peck of bulblets will contain many thousands, the number, of course, depending on variety, etc. The Editor had some experience with a half bushel of Mrs. Francis King bulblets which produced in the neighborhood of 25,000 blooming

size bulbs the second year. Of course there is a lot of work in digging bulblet grown stock and in cleaning them, but nothing can be had without work, and this fact is mentioned here to show that while a half bushel of bulblets will produce a lot of blooming size bulbs in a couple of years, yet in the meantime it takes a lot of labor to take care of them.

Those who are growing Gladioli for the first time this year may find the following suggestions useful:

If planting named varieties see that they are carefully marked by putting wooden stakes at both ends of the row where they are planted. If you have no regular garden stakes or labels you can easily make first class stakes by splitting smooth, strait-grain cedar shingles. These can be easily pointed with a knife at the thin end and the names written on the thick end of the shingle with a blue pencil which will easily last during the season. Of course the metal labels suggested by Mr. Black or the splint labels suggested by Mrs. Austin are better, but nearly every one has shingles accessible.

Much of the satisfaction of growing Gladioli is lost by not keeping the named varieties properly separated when planted.

One of our subscribers suggests that those who have had trouble to get a good germination of bulblets should try soaking them in rather hot water. He recommends that this soaking should continue for several days, the first application to be pretty hot, a water just a few degrees below boiling and grading cooler each day for four or five days or even as long as a week. He states that since he has practiced this plan he gets a sure stand as well as an early growth.

English sparrows are plainly a nuisance—everybody admits that—and besides they destroy the nests of other birds and drive them away. We call attention to the advertisement of John Davey, the tree expert, of Kent, Ohio, already well known to some of our readers. Mr. Davey is engaged in a good work and is deserving of all the help he can get in its prosecution.

Minnesota.

(Subject of illustration on front cover.)

This variety is another illustration of the fact that Mr. H. H. Groff's seedlings have furnished us with many fine varieties which were so good that they *had* to be named so that they could be intelligently ordered by those who wanted to grow them and sold and delivered by those who had them.

I think it was in 1907 that I bought from Mr. Arthur Cowee a thousand Special Florists' Light Mixture in large size bulbs. Among the first to appear in bloom was a large, strong stemmed variety of a pale cream color with a small brownish maroon blotch. The flower had great "substance" and was wide open and the stem was never crooked though slightly arched, and had the ability to take up plenty of water. In every way it was satisfactory. The shade was one which harmonized well with most any other shade, and the cut flowers opened up in a very pleasing delicate shade, good to the last.

As this variety (of which there were a number in the thousand referred to) opened up, first I numbered it "2-701" which signified that it was of section 2, and was bought in 1907, and was the earliest. Afterward, when attending one of the Conventions of the American Gladiolus Society, I saw a vase marked *Lafayette*, which I thought was the same and so I labeled it *Lafayette*. Under this name I sold several thousand to one of our largest eastern growers who informed me, when it came into bloom, that I was in error. However, he liked it so well that he bought what I would spare for next season. At the Minneapolis convention the nomenclature committee adopted the name *Minnesota* which had been given it by Mr. D. W. C. Ruff.

Minnesota, like *Independence*, is very prolific and it has also the habit of flowering from very small corms. The photograph was taken in 1911, I think, and with no intention of making a plate, and does not do justice to the variety. It shows, however, something of the fine habit and lasting quality which distinguish it. The flowering period is from two to three weeks earlier than *America*, so that the flowers are available before the market is full. In 1914 many of my bulbs a half inch and less in diameter, (so small that they were planted along with bulblets with the machine) gave good spikes of bloom, some of which I showed—roots and all—at the State Fair in Des Moines.

GEO. S. WOODRUFF.

WAYSIDE RAMBLINGS.

TIME OF BLOOMING—WEARING OUT OF
GLADIOLUS CORMS—EXPERIENCE
WITH WEAK CORMS.

Below is a list of varieties of Gladioli with the date when first bloom opened. Unfortunately the date of planting was lost, but it was some time the first week in June, I think, but as all the varieties in the list were planted the same day the comparative blooming period is just as well indicated. (Location, Northwestern Pennsylvania.)

Pink Beauty	August	8
Unknown Lemoine	"	8
Chicago White	"	12
Brenchleyensis	"	14
Halley	"	20
Lily Lehman	"	22
America	"	23
Glory (Kunderd's)	"	23
Velvet King	"	25
Hollandia	"	26
Brenchleyensis from another source than above	"	26
Taconic	"	26
Klondyke	"	27
Golden King	"	30
Wm. Mason	"	30
Early Amethyst	September	1
Variabilis	"	1
Grace Henry	"	2
Panama	"	7
Crawford's Yellow Seedling	"	8
Helen Sill	"	10
Canary Bird	"	11
Mrs. Francis King	"	11
White Lady	"	18
Margaret	"	18
Princes	"	18

However, I do not regard such a record as the above, standing alone, as of much value. It must be taken in connection with similar records for a period of years to be of real value. Also there should be a fair number of bulbs of each variety and they should be from the same source and in as nearly as possible the same condition when planted.

In my collection there was only one bulb of a few varieties and only from two to six of the most of them, and they were from three or four sources. The two *Brenchleyensis* bulbs in the above list illustrate the point. Yet there was no more difference in the blooming period of these two bulbs from different sources than there was in the case of several other varieties with all the bulbs from the same source. Doubtless this difference in the

blooming period of bulbs of the same variety corresponds in a general way with the difference in the time of the appearance of growth above ground of the individual bulbs, which varies much.

Before closing I will add a word on another subject. I am somewhat skeptical of what several experienced growers, writing in THE MODERN GLADIOLUS GROWER have assumed to be a fact, namely, that after, a few years bulbs propagated from successive growth from the old bulb, deteriorate and become worthless. I think most amateur gardeners never propagate any other way.

From my own experience I can say I have a seedling I have been growing probably over 20 years. And all that period have used the large bulbs only except for the occasional use of an exceptionally large cormel in the last few years. I set out about 500 bulbs of it last season and it was the most rugged and freest blooming variety in my list, and if there was among the whole 500 or more bulbs one that did not give one or more spikes of bloom I failed to notice it. A few of the purchased varieties failed to give bloom, but they probably were propagated from bulb-lets.

Like another correspondent, I had an experience two years' ago with late set bulbs that failed to make any growth except a leaf or two a few inches tall. These were of several varieties of bulbs got of a seed firm. I was surprised at digging time to find fairly good plump bulbs from these weaklings, and last summer got strong plants and good blooms from them.

H. ERNEST HOPKINS.

DEFINING THE AMATEUR.

I am very much interested in the article by James M. Adams in the November issue of THE MODERN GLADIOLUS GROWER, "What is an Amateur?" But as an amateur grower, I cannot agree with Mr. Adams on some points. It does not matter much whether one is an amateur or a professional grower until exhibits are made competing for premiums or prizes.

My hobby is Dahlias and I have been exhibiting at Horticultural Exhibitions for several years and have also been closely connected with one of the oldest Horticultural Societies in the country, and I am fully convinced that the only safe ground for any society that is giving prizes at exhibitions, is to demand that to be an amateur one must not sell at all. And our society goes still further and says that an amateur must not employ paid

assistance. This is to bar out those who employ professional gardeners.

I will agree with Mr. Adams that it seems only fair to allow an amateur to dispose of surplus stock to a few friends and with the proceeds of such sales, replenish stock of new varieties, but the trouble comes in knowing where to draw the line. Some amateurs would need to dispose of five dollars' worth, while others might sell fifty dollars' worth or even one hundred dollars' worth and still claim to use all the proceeds for new stock.

You may say that an amateur is one who does not issue a trade list or who does not advertise in any way. I know professional growers who are so well known to the trade that they can sell all their stock without an advertisement of any kind. Then, again, if an amateur was allowed to sell, the question would be brought up in any society giving exhibitions as to how much one could sell without becoming a professional, and to decide the question where one began and the other left off would lead to no end of trouble. So I think the only safe definition of an amateur is one who does not sell at all.

HERBERT F. CLARK.

GOLDEN WEST AND PACHA.

TO THE EDITOR:—

I wish to comment on one of the articles which was contained in the March issue of THE MODERN GLADIOLUS GROWER. G. *Golden West* was selected from a collection of choice Groff seedlings, as were many other named varieties of the present day. The stock was increased to about 2,500 in number when my father sold it to Henry A. Dreer, of Philadelphia, who gave it the name it now bears. The transaction took place in 1902 or 1903 for a consideration of \$100; at that time the best new Gladioli were not valued as they are to-day, else this stock would have been worth more money. The large corms were forwarded and sold by the above firm, the smaller stock being left in our care to grow. It being a shy producer stock could not be grown fast enough to keep the firm in stock, consequently it finally fell into our hands again. We still have the original stock. The second year after the purchase of *Golden West* by Mr. Dreer, a number of *Pacha* were sent us to grow to ascertain if possible whether this same variety was on the market under another name. Upon growing the two side by side a great difference is noticeable, but time of bloom is somewhat different, and also the size of the bloom and markings of the flowers as well as the color of the flower. However, either

would make a good substitute for the other. The corm of *Golden West* is an orange pink while the corm of *Pacha* is more of a white or yellow shade. I have grown both of these varieties for years.

W. W. WILMORE, JR.

BULB VS. CORM.

The discussion regarding the use of these terms in connection with the Gladiolus recalls to mind the remark made by my professor in English, than whom there never was a higher authority, regarding the use of the terms "Bug" and "Beetle." In effect he said:

"The entomologists tell us that, of the insects commonly called bugs, only those which have a sucking mouth really are bugs; those which have jaws are not bugs at all but beetles, and the people are in error in calling them bugs. In that the entomologists are wrong. Within the confines of their science, they can limit the application of words as they see fit, but the word "Bug" was the property of the English-speaking world to refer to both classes of insects long before there was a science of entomology or an entomologist, and therefore in that field the entomologists are wholly outside their jurisdiction in assuming to dictate with regard to the word."

So, too, I do not doubt the English-speaking world long before the day of Linnaeus, owned the use of the word "Bulb" for the type of root possessed by the Gladiolus.

B. C. AUTEN.

METHOD OF APPLYING CHICKEN MANURE [TO GLADIOLI.]

TO THE EDITOR:—

In the March issue on page 37, the inquiry was made with reference to the use of chicken manure: A good way is to make a mixture of half chicken manure and half soil. These should be thoroughly mixed and then dampened and put into barrels and allowed to stand ten days or more. This mixture should be applied lightly and well raked into the soil as a top dressing. It may be raked into the soil before planting if desired. Used as suggested there is very little danger from it.

C. BETSCHER.

PENDLETON AS A DROUGHT RESISTER.

One of the desirable qualities of that most beautiful of all Gladioli, *Mrs. Frank Pendleton*, is that it resists drouth so well. This feature makes it valuable for landscape use.

H. W. GROSCHNER.

Hardy Phlox.

BY WILLIS E. FRYER.

Phlox are one of the most desirable hardy plants we have, and for late summer and autumn-blooming, are indispensable. Their wide range of intensely brilliant colors includes almost every shade but yellow and in the most varied and striking combinations imaginable. From purest white to delicate flesh and soft pink shades; through salmon, orange and fiery scarlets, the colors go to deep blood-red and crimson, dark maroon, and amaranth. There are pale mauves and lavers, soft blues and deep violets. There are large white centers, surrounded with a border of strong color, and flowers of

They like plenty of moisture, and in dry seasons should be plentifully supplied with water. Unlike most flowers they will thrive in partial shade, where the colors are brighter and endure longer than in the open sunlight. Their natural season of bloom is July, August and the first of September, but by pinching out the top of part of the plant before buds have formed they will form many branches and bloom much later.

Phlox may be planted in either fall or spring. I have planted them in August, and as late as early December, but have found by experience that in October, and



Phlox Grown on Mr. Fryer's Place at Mantorville, Minn.

soft, delicate shades, with vivid scarlet or crimson eyes, and petals with range of colors in different shades.

No flower has been more wonderfully improved of late years, and the immense size and perfect form of the new varieties will be a revelation to those who have heretofore seen only the old-fashioned kinds. They are effective either as single specimens, small groups, or large beds on the lawn. They produce a beautiful and harmonious contrast when massed against a background of shrubbery.

Phlox require a rich soil to produce the best effect, as they are gross feeders.

until the ground freezes, has given the best success. In December 1913 I planted a number of hundred of very small plants, and all grew finely and blossomed freely in 1914.

Phlox are very free flowering, and the tiniest plants will blossom freely the same season they are planted. There is no hardy plant that will make more show, and their long flowering season is another quality in their favor.

When planted in the fall they should in the north be mulched, but not before the ground freezes, with leaves, straw or other litter.

HINTS FOR THE BEGINNER.

BY FRANK S. MORTON

SELECTING THE BULBS.

The first start in Gladiolus raising is important although future success depends on a very few things. Broadly speaking, the two important points are to get the right bulbs and plant them in the right place. How they are planted is not so important as where they are planted and the kind of stock used.

The best way for a beginner to get the right bulbs is to decide on how much money he wants to spend and then write to some good dealer—the advertising columns of the MODERN GLADIOLUS GROWER will furnish lots of addresses—and state your case to him. Write that you are not acquainted with the various kinds but want a good start in varieties that will produce good flowers under average conditions. A safer method than this could not be found as there are very few dealers who would not exert themselves to fill such an order in the spirit given. But do not take up with any and all offers that are cheap. Beware of department store bulbs as the chances of getting varieties that will compare well with your neighbors' are remote. Possibly you might, but the chances are against it.

The local dealer may or may not be a good one to go to, but in general the local dealer is not a specialist but buys his seed and bulbs from all sources. Price cuts quite a figure and many have for the past few years put in stocks of Holland bulbs that have sweated and rotted to such an extent that a large proportion are valueless. And while one might find a dealer who knows and will recommend the right bulbs, the chances are against getting the right start from the local store.

If, however, it is more convenient or necessary to buy of the general seed store, bulbs should be selected that are firm and fresh looking and that do not show black spots or other signs of rot. Size is not so important as many of the choicer flowers give a very small bulb. But if the bulbs are flat and thin vertically it is a sign of age. If on the other hand, they are thick and conical shaped it is signs of youth. The bulb is then just coming to blooming age. As the years go by it will flatten down at the center. So beware of bulbs that are too flat as many may be past blooming value.

As to varieties—in the case of the professional Gladiolus dealer, as mentioned above, allow him to select for you and you

will receive an assortment of the standard varieties, best adapted for the beginner. In the case of the local seedsman, you will have to take what he has. In this case get named varieties if possible as mixtures at the general store are doubtful propositions.

PREPARING THE GROUND.

As to the place where the bulbs are to be planted: It must be in full sunlight all day. It must not be in a flower bed along the shady side of the house nor under trees. The Gladiolus loves sunlight and thrives best when it is bathed in the sun's rays all day long. The place must not be too damp. Any ordinary garden spot will do. Any place where potatoes can be grown successfully will do. It will do also to spade up a bed in the lawn or in the field. If this is done the bed should be prepared at once by cutting away the sod and carefully shaking every bit of dirt that adheres back into the bed. Spade deeply but if prepared in the spring do not spade in any manure. Just as soon as the frost is out turn over the earth and let it lie exposed to the air. If to be placed in the regular flower bed, spade the earth up thoroughly and if the bed is an old one sprinkle on a little powdered lime to sweeten it up.

During the month of April get your bulbs together and prepare the ground as above. Have ready also a little commercial fertilizer or well rotted manure of any kind. While the bulbs can be planted early there is no need to plant them and the May issue of the MODERN GLADIOLUS GROWER will appear plenty early enough to give directions for placing the bulbs in the ground.

H. E. Meader, Dover, N. H., has sent us his new catalogue of Gladioli. In addition to listing a careful selection of the best varieties, Mr. Meader gives some useful information on growing the Gladiolus. We are pleased to note that the American Gladiolus Society and THE MODERN GLADIOLUS GROWER are both mentioned and this should be so with every catalogue of Gladioli that is printed. Every source of information and help that will increase the popularity of the Gladiolus should be given prominence. Mr. Meader lists varieties that are quite uncommon and therefore his catalogue should be in the hands of all growers.

A larger number of Gladiolus catalogs have been issued this year than ever before. This will help Gladiolus popularity.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Forcing "America" and "Mrs. Francis King."

TO THE EDITOR:—

Have just planted a bench in my greenhouse with *America* and *Mrs. Francis King*, and as it is my first attempt to grow them inside would like to know the best method of culture. The bench contains about six inches of soil, composed of rotted sod and manure. Will it be necessary to feed with liquid manure? Is 50 or 55 degrees at night enough? Any other information will be appreciated.

A. E. C.

Answer:—Your correspondent "A. E. C." should force *Gladioli* successfully under the conditions stated. It is regretted that more sorts are not grown; *Augusta*, *Brenchleyensis* and *Chicago White* force well and bring good prices.

It will not be necessary to give liquid manure. Keep the soil well stirred and when the spike is formed in the sheath give a good dressing of pure sheep fertilizer and wash it in with the hose. This will be of benefit to the *Carnations* as well as the *Gladioli*.

Let me add that pure sheep fertilizer has no offensive odor, no more than placing one's hand on a sheep's back.

HENRY YOEUELL.

Bulblets and Bulbs— Bulbs or Corms.

TO THE EDITOR:—

What is a bulblet, please? According to the dictionary it is a small bulb, but in different places in THE MODERN GLADIOLUS GROWER there seems to be some other distinction than the matter of size, as when one writer speaks of the difference between a half-inch bulb and a half-inch bulblet.

Whatever a bulblet may be, it no doubt in time becomes a bulb: please say when.

M.

Answer:—It is the general practice of the *Gladiolus* growers in this country to apply the term bulblet to the small bulbs which grow on the bottom of the large bulbs and which are covered with a hard shell which is usually of a blackish brown color. The small bulbs that grow on the sides of the large bulbs are designated as small bulbs and not as bulblets. After

the first planting the bulblets lose their hard shell and become small bulbs.

As is well known, the term bulb is incorrectly applied to the *Gladiolus*—the proper term is corm; and the difference between the two is not fanciful but quite real. Webster's Dictionary defines a bulb as "A cluster of partially developed leaves" and the same authority describes a corm as "A solid bulb-shaped root." The onion and tulip and meadow lily are given as examples of true bulbs, while the crocus and *Gladiolus* are corms.

MONTAGUE CHAMBERLAIN.

Growing *Gladioli* from Seed.

TO THE EDITOR:—

You would confer a favor on at least one of your readers if, before the planting season comes, you could publish a short article in THE MODERN GLADIOLUS GROWER on the proper way to plant *Gladiolus* seeds in the open ground.

Knowing that corms should be planted rather deeply to get best results, it is a question with me whether the seeds should not be planted in a sort of a trench and the soil filled in around the little plants as they grow.

H. W. M.

Answer:—Different growers have different methods of planting, but generally speaking seeds are planted from one inch to two inches in depth for best results. The preference is given to one inch in depth or possibly a little less providing that after planting, a piece of old carpet or bagging is laid over the seed bed and kept in place until the seedlings appear above ground. In shallow planting the ground is likely to dry out unless this is done, as it is hardly practicable to wet the ground sufficiently often to secure prompt and satisfactory germination if the seeds are planted shallow. Deep planting of seeds is undesirable for the reason that the tender seedlings find it more difficult to make their way to the sunlight. Your suggestion, therefore, to plant in a slight trench might be a good one, but the tiny bulbs should not be deeper than two, or possibly three inches at most after the trench is filled in.

If a little trench is made with any

pointed instrument, and the seeds covered in the usual way, it will be found that there will naturally be a slight depression when the seedlings appear. This will gradually be filled in the proper cultivation of the seedlings with a rake so that if a trench one inch in depth is made the small corms will be at least one and a half inches below the surface.

As a general statement the best way to do a thing is the simplest way, providing it will accomplish the desired result, and we know of no better way nor any more simple way than above suggested, by planting Gladioli seeds very much the same way as you would plant vegetable seeds, and covering in the same way. The covering of the seed bed with carpets or bagging or something to prevent the evaporation is desirable and almost necessary.

Growing Gladioli from seed has already been discussed quite fully on pages 15, 54, 68 and 106 of volume I of THE MODERN GLADIOLUS GROWER for 1914. This may be had in bound form with index for \$1.00 postage paid from this office.

MADISON COOPER.

Primulinus and Primulinus Hybrids.

TO THE EDITOR:—

I have noticed in some catalogues mention of a type of the Gladiolus called *Primulinus*. Would you kindly give me a little history and description of it if not too much trouble? F. G.

Answer.—The *Primulinus* was discovered six or seven years ago growing near the falls of the Zambezi river in Africa. It is a wild species of pure yellow color and has proved useful for cross breeding. The flower is small and hooded and its hybrids partake of this latter characteristic almost invariably. The blossoms are set quite widely apart on the stalk and it is of a rather willowy growth. Some excellent hybrids of *Primulinus* have already appeared and as soon as the stocks are large enough for dissemination they will doubtless be placed on the market and taken up readily. The most of the crosses are, of course, inferior on account of the small size and novel characteristics inherited by the parent *Primulinus*. *Primulinus* crossed with red varieties gives a great range of orange and salmon shades and variegated colors that are very beautiful and the predominating yellow tint and the modestly hooded flowers make them very interesting.

MADISON COOPER.

We again suggest that our friends who are interested in increasing the popularity of the Gladiolus should send us the names of those who are growing Gladioli.

CLASSIFIED ADVERTISING.

Growers having surplus stock for sale will find this department effective in disposing of it. Five lines (about forty words) \$1.00 per insertion. Additional lines 15c. each.

HYBRIDIZING to Order—I will undertake to grow hybridized Gladiolus seed to order from such varieties as are compatible. Write for my proposition. GEO. A. WHITNEY, 151 Winter St., Auburn, Me.

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THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.
Published Monthly by Madison Cooper, Calcium, New York.

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No. 5



GLADIOLUS—HYDE PARK
(For description see page 64.)

The Gladiolus Manual.

BY W. W. WILMORE, JR.

CHAPTER II.

Gladiolus Species.*

IN the following description of species an attempt is made to briefly describe the important factors, giving dates of introduction, native localities and their descendants, if they be an important ancestor.

In the following, eighty or more species only are mentioned, although the genus consists of about one hundred and fifty. Sub-species and types will be mentioned under Chapter III, "Introduction into Cultivation."

G. adlami. A dull yellow species carrying small red spots on petals, it is a native of Transvaal, South Africa, was introduced in 1889; blooms in July.

G. aequinoxialis (unable to describe).

G. alatus (winged-flowered), an interesting sweet scented species; the corms are very small and will not live long out of the ground. The flowers are produced in June. They are orange scarlet in color, the lower petals being blotched yellow. The plant attains a height of one foot. It is a native of Southern Transvaal, South Africa. Introduced in 1795; first flowering in England. According to Dr. Van Fleet, this species when crossed with summer-flowering species, loses all attractive characteristics.

G. albidus (white Gladiolus). This is the nearest approach to a pure white in the Gladiolus species. It has a slight stain on the back of the petals before they expand, only. It is a very dwarf variety growing but 12 inches high; spike carries from three to four flowers, well opened, blooming in June. It is considered by some as a parent of the sub-species *Colvilli alba*; was introduced in 1774 from Cape Good Hope.

G. Algoensis (Algoa Bay Hyacinth). This species is sometimes considered as a variety of *G. alatus*. It is a native of the east coast of South Africa. It is closely allied to *G. viperatus*, having the same general appearance and form. It comes from a much warmer climate than that of the Cape Good Hope species, yet the

corms are more nearly hardy than those of the cooler climates which is a peculiar circumstance. It attains a height of 12 inches. The color of the flowers is a greenish white with dark markings; was introduced in 1824; blooms in July.

G. amatympinus (unable to describe).

G. amoenus (unable to describe).

G. angustus (narrow leaved) This species is a dingy white or sad yellow. It is one of the first species introduced, 1756, and is one of the least attractive. It grows about 22 inches high, was brought from Cape Colony; blooms in June.

G. aphyllus (leafless). This curious species can be grown only in a greenhouse. It flowers very early, resembling the genus but little. It is seldom seen and little known. Under glass it blooms during January or February. Introduced from Cape Good Hope.

G. atrovioleaceus (violet flowered). Is a native of the Mediterranean district near Palestine, is a very early blooming species, can be forced in 80 days under glass, when planted in cold-frames with Nanus or Colvilli varieties, will bloom a month in advance of the earliest variety. The flowers are small being closely set on a slender spike 10 to 12 inches long. They are purple in color, resembling the harebell; is of value as a cut flower as well as being one of the few purple species. Was introduced in 1889; blooms in May.

G. biflorus (two-flowered). A violet colored species blooming in June, a species well worthy of cultivation and listed by some of the European growers. Little is said as to its origin or introduction.

G. binervius (two-nerved). A species of little consequence; the leaves are heavily veined, flowers salmon colored, attains a height of 12 to 14 inches, blooms in July.

G. blandus (blush). A very pretty species; the flowers are almost white, not unlike the color found in the apple blossom; the flowers are stationed on opposite sides of the spike, resembling in this feature, the species *G. oppositiflorus*. The flowers also carry a blotch of red on the lower petals. It is one of the important of the early species. In the first part of the 19th Century, Hon. Rev. W. Herbert crossed this species with *G. cardinalis*,

*The writer in the compiling of the chapter on "Gladiolus Species" has consulted all sources available to him, among which might be mentioned especially the following: "The Dictionary of Plants," "Allen's Bulbs and Tuberous Rooted Plants," "The Gladiolus," by Matthew Crawford and Dr. Van Fleet.

producing a very beautiful race. Other crosses have been made with *G. tristis*, *G. oppositiflorus*, *G. hirsutus*, *G. alatus* and *G. psittacinus*, but none of the crosses has caused the popularity of the flower which has since been attained. It was introduced from Cape Good Hope in 1774. It blooms in June.

G. branchyandrus. An inferior species from the Zambesi Valley, South Africa, flowers are of a reddish brown, grows 20 to 24 inches high. Introduced in 1879. Blooms in July.

G. brevifolius (short-leaved). A tender species growing 18 inches high. The flowers are borne on a tall naked spike and are of a pleasing shade of pink. Was introduced in 1802 from South Africa. Blooms in June.

G. byzantinus (Turkish). A native of Turkey, is perhaps the hardiest of all species. In localities where winters are moderate it is used as a hardy border plant making an appearance year after year. It multiplies very slowly so is not troubled by crowding. It delights in an airy and light location, growing 22 inches high. The flowers are purplish red, blooms in July, was introduced in 1629.

G. campanulatus (bell-shaped). A dwarf species introduced in 1794, it is less bell-shaped however than many of the species. How it derived its name seems a problem. It is a very pretty plant attaining a height of 18 to 20 inches. The flowers are a deep lilac, lower petals stained red, it was introduced from Cape Colony. Blooms in June.

G. cardinalis (Superb, scarlet). A species which is due great credit, it being a parent of many of our present day varieties. The Gandavensis type can trace their blood to this ancestor, also the Colvilli varieties are undoubtedly descendants, so do the Nanus varieties have this blood in their veins. It attains a height of four feet, being branched toward the top of the stems, each branch bearing from six to eight bright scarlet flowers with a white diamond blotch on the lower petals. Flowers are large and well formed. It is well worth growing and is best treated as a fall bulb. They should be planted in cold frames and covered with a sash and shutter. The true origin of this plant is not certain. It is supposed to have come from Cape Good Hope.

G. carneus (flesh color). A worthy species which has transmitted its blood to many of our present day varieties. The flowers are a beautiful flesh color, each carrying a diamond shaped blotch on the lower divisions. It grows about three feet high. The flowers are large and showy with heavy broad foliage. Was

introduced in 1796 from Cape Good Hope. Blooms in June.

G. Caucasius. An inferior species introduced from Caucasus in 1842; very little is recorded in regard to this species.

G. Childsi. See Chapter III.

G. cochleatus (Spoon-tipped). A peculiar species of tender texture, it can rarely be had in flower unless grown under glass. The formation of the flowers of this species is the opposite of that of other species, the lower petals of this plant are the larger. The flowers are white with red markings. It grows 20 inches in height, blooming in May; was introduced in 1829 from Cape Good Hope.

G. Colvilli (Colvills'). A hybrid which has the constancy of the species. It was raised in the nurseries of Colvill in 1823 from seed of *G. tristis* x *G. cardinalis*, the latter being the parent plant. There is, however, room here for discussion, as some authorities regard this sub-species as the offspring *G. concolor* x *G. Cardinalis*. The flowers are scarlet, shading to almost purple at the margin of the petals. A few years after the introduction of this species it sported white with two individual growers at the same time and was given the name of Colvilli *alba*. We now have several distinct varieties of it nearly all possessing the characters of true species. The flowers are well formed, comparatively free from markings or blotches; from six to eight flowers are produced on a long graceful stem. It might here be remarked that Colvilli the *Bride* is the purest white Gladiolus in existence and is one of the most popular and widely grown winter-flowering or forcing Gladioli in cultivation.

G. communis (corn flag). This species is distributed throughout the Southern part of Europe. It consists of three varieties, white, red and purple, all are of the same general habit. It was brought into commerce in 1596, being used in the medicine of that day as a bitters. It was first noted in 1575. It being a popular species it has not as yet played an important part in the foundation of the modern Gladiolus as we have it. When well grown it stands two feet high, blooms in July or late June.

G. concolor (one-colored). This species is a clear yellow, flowers growing on one side of the spike only. It stands 15 to 18 inches in height. The fragrance of this flower is very sweet, being most notable just after sundown. It is best grown in a cold frame as it requires slow, cool growth. The corms can rarely be kept over winter and planted out in the spring. It was brought into commerce in

1790 from Cape of Good Hope. It blooms in June.

G. Cooperi (Cooper's). Introduced in 1862 from Natal, the color is red with yellow markings. It stands 30 inches high when well grown, blooming late in August.

G. crispiflorus (helmet-flowered). The blooms of this species are of several varied shades and hues. It was introduced in 1842 from Southern Europe. It grows 24 to 30 inches high, blooming in July and August.

G. cruentus (bloody). This species was introduced in 1868 from Natal, So. Africa. The flowers are large, the color being a deep blood red. The spikes are about 10 inches long, each bearing four to six flowers blotched with creamy white, speckled with red. This species is seldom seen except in botanical collections. It blooms in September. A cross of *Cruentus* x variety *Mrs. H. Beecher* resulted in the variety *Princeps* which has become so popular.

G. cumioma. A scarlet flowered species of uncertain origin and introduction. It attains a height of 18 inches, blooming in July.

G. cuspidatus (sharp pointed). The petals of this species are long and pointed, flowers are a creamy color with purple blotches overlaid with yellow. It grows 18 inches in height, blooming in May, was introduced from the Cape in 1795.

G. cuspidatus ventricosus. A variety of the above species with reddish drooping flowers, the tube of this variety is shorter than the former, also are the spathes less inflated.

G. debilis (weak). A species bearing but one flower on each spike, differing from all other species of the genus. The petals are uniform in size, white with pink spots on the inner segments. It grows 16 inches high, blooms in early June; introduced from the Cape.

G. decoratus (graceful). A tall growing species from East Africa, the flowers are large, well expanded, scarlet in color with straw-colored markings. It stands three feet in height; was brought to Europe in 1890.

G. dracocephalus (serpents-head). This peculiar species was found in vicinity of the Natal River, East Africa. The flowers are more curious than beautiful. They are of a yellowish color with dull purple red stripes. The lower sections are bright green, spotted purple. They are of good size and bloom in July. The plant grows 30 inches high, was introduced in 1871.

G. eckloni. The flowers of this plant are a flesh color spotted with red. The

hybrids of this species are very beautiful but are slow producers. It was brought from South Africa in 1862. The plant grows 16 to 18 inches high.

G. edulis (edible). A native of the Cape of Good Hope where it is used for food. The small white corms are roasted and eaten as chestnuts in this country. It is remarkable on account of its lack of beauty. The flowers as soon as opened take on a withered appearance. They are white in color, produced on stems 16 inches long. Their blooming season is in June. It was introduced in 1890.

G. Elloni. A white species, flowers being tipped with purple, grows 20 inches high; introduced in 1890 from East Africa.

G. fasciatus. A tender species of great beauty, being best treated as a greenhouse plant. It grows from six to twelve inches in height. The delicate pink flowers are marked with a crimson streak. It comes from Cape Good Hope, but the date of introduction is uncertain.

G. festivus (gay). The flowers of this plant are a lively pink. It grows 20 to 24 inches high, blooms in July, was introduced in 1884. A Cape species.

G. flexuosus (crooked). The flowers are an orange shade being borne on stems 12 inches long. The plant comes to bloom in June. Was introduced in 1825.

G. floribundus (many flowered). A species well worthy of cultivation. It is the equal of many of the early hybrids, the large, well opened flowers, are borne on opposite sides of the spike which is but 15 inches long. The flowers are white, striped pink. With slight protection it is hardy. Was introduced in 1788 from Cape Good Hope.

G. formosissimus. A species with scarlet flowers marked with white, growing 18 inches in height, offered as a forcing Gladiolus by several Holland growers.

G. fragrans (Babiana plicata). A purplish red species growing about 20 inches high, flowers are sweet scented, uncertain origin.

G. Froebeli, Hort., is *G. Gandavensis* x *G. Saundersii*, var. *superbus*.

G. Gandavensis. See Chapter III.

G. Gelria. A hybrid strain, seemingly of Holland production. The strain comprises all colors, including dark blue, lilac, pink, white, red and yellow. The flowers are of magnificent form and texture, especially adapted for cutting.

G. glaucus (gray). A new species from the mountains of Southern Greece. The flowers are of a purple-red, striped with white, it grows about 14 to 18 inches high; blooms in May.

(Continued next month.)

MRS. AUSTIN'S TALKS FOR AMATEURS.

GLADIOLUS GARDENS.

One of our great actors in his old age advised all elderly people to have a garden, as they would then have something new to anticipate and enjoy each day. He had known what it was to be on the crest of the wave, to be feted and flattered, but Father Time silvered his hair, made his step slow, and in his declining years his garden brought him pleasure and happiness in as full measure of his need as the crowded halls of his younger days.

He had learned that the secret of keeping his heart young was by forgetting to count his years and infirmities and by bringing to himself an occupation of ever varying interest. It is monotony that kills, but our sovereign Queen Nature provides a life of changeable pleasure for us all if we will only heed and make ourselves receptive.

How delightful that for the most of our allotted span of life we may be young. In our childhood days the world is new to us, everything is interesting. All that we see and hear makes impressions that are ever retained. We grow old in the rush for the dollar or in following Ambition's will-o-the-wisp. Life appears to become a game of chance which we play with feverish absorption and through which we may, perchance, win success, but time dulls our interest, the game begins to lose its zest, we relax our hold, a pause, reflection, then—a bunch of flowers, the song of a bird or perhaps a violet's fragrance, may recall a scene or incident in our early life and the flood of years recedes and we are young again, happy and content with the simple pleasures and occupations of our younger days.

It is my privilege to have at heart the interests of two young (past seventy) ladies. Both have led busy lives; have had their share of joys and sorrows. One now passes many pleasant hours in making tatting as she learned to make it when a school girl, and I am told many times of the beautiful wheels and clover-leaf tatting that Agnes or Sally used to make during the noon hour in those never-to-be-forgotten days.

The other, having always been a lover and to some extent a grower of flowers, still retains her interest in their cultivation. Her tiny garden is the beauty spot of her neighborhood. A visit to a greenhouse full of growing and blooming plants is a special delight. The spicy fragrance

of the carnation brings back the remembrance of her bed of Clove Pinks of fifty years ago, and she tells the patient florist what a wonderful bed it was and just how she prepared the soil for it before planting. So it is that the interests and occupations of our young life are often the means of bringing us comfort and contentment in our later years.

There is a great Back To The Land movement which in many instances ends in disaster to the one who undertakes it, for the simple reason that he knows nothing of even the first principles of farming, gardening or floriculture. Our measure of pleasure or success in anything is according to our knowledge, and it would seem wise to make some preparation for the life Back To The Land, and I can think of nothing better than by taking up gardening. Let it be a flower garden, for flowers are so cheery and encouraging, you will soon learn to love them and care for them. If you have never grown them, do not omit this pleasure from your life, and if you have grown them sometime in that first youth, you can bring that experience to your aid now in your quest for an avocation that will not only bring you cheer and contentment but remuneration as well if carefully conducted. You will lead a busy life, no time for loneliness, always something interesting *in the garden*. There is a flower about to open *in the garden* and you do not wish to miss seeing it, you would not wish to be away.

And those of you in your first youth start that garden now. The Back To The Land movement is a great progression but I prophecy a greater one—the Stay On The Land movement. The farms will be smaller, the farming more intensive, there will be more specializing. Get ready for it. All flowers are interesting and beautiful, and the culture of most of them is simple, but one cannot work with them and not wish to improve them. Some are more easily grown than others, and respond quicker to careful and intensive cultivation. The Gladiolus is one of these, so easy to plant, so sure to grow, that for the inexperienced amateur I would advise beginning with a Gladiolus garden. Now do not think that a Gladiolus garden would be a tame affair. Far from it, for the Gladiolus has enough variation of form and color to be a complete garden in itself. If a large garden planted in rows they may be cultivated by the horse, but if a small garden they may be kept free from weeds, and soil loosened by using the hand weeder or the hoe. Get a variety of colors for there are reds and

blues, pinks, yellows, white with all the intermediate shades. Right here is where the Gift Box finds a place, for if you know of a friend who might be interested, bring the thought to his mind by sending him a box of bulbs, and thus start another garden. I hope there will be thousands of these new beginners making a start with their *Gladiolus gardens* this month.

To many a business man this would be a healthful recreation after the transactions of a busy day. He becomes interested, for Gladiolus growing does not tax his nerves. It is restful, and he discovers that he has found a congenial occupation that he can follow when the time comes for retirement from his business or professional life.

MRS. A. H. AUSTIN.

Preparing and Selecting Gladiolus Corms for Planting.

BY GRACE RE SHORE.

For the amateur or small grower the question has often been asked: "Should the husk be removed from Gladioli before planting?"

From my experience, I would say *emphatically yes*. If you want to know the particular kind of disease you are buying, remove the husk, and if you find lice, remove them also; no use in planting them, you can find enough in your garden—black and white, green and red—without importing them. The only gray lice I ever saw, I bought with a small lot of corms from a well known eastern dealer. I found no trouble in removing them and have never seen one on a corm since, but I buy few that are not affected more or less with black or dry rot which many times cannot be seen unless the husk is taken off.

That same clean and satiny exterior often covers a variety of sins which, if seen, can be treated, or if too badly affected, corms had best be burned. If the black or brown spots are small you can operate on them with a sharp penknife, cutting out the spots, then soak before planting in the Formalin solution, and if planted in new soil you may often succeed in producing healthy stock, where if corms are planted without examining, you may soon ruin your whole stock.

If the spots are deep, running well into the heart of the corm, better burn them at once or you will never be able to have good blooms or corms from such stock. To be sure, the large grower can not do this, but the beginner who buys only a few choice corms each year and plants them with "great expectations" can well afford to take the time and trouble to ex-

amine and know what the stock he buys is like, and you can not know unless you remove the husk. So by all means do so. If you are planting hundreds or thousands you can take the time to at least examine a few corms of each lot bought and it may be a surprise to you to see how few perfectly sound corms "free from disease" you will find. American grown bulbs for the American amateur are best if they can be had. There are many very beautiful French, German and English varieties. If they have good clean, healthy stock in those countries they keep them for home consumption as not many such find their way to America.

If you are a grower of only a few choice varieties, examine them with care when received and so prevent disappointment later. If you know that your stock of corms is entirely free from disease, plant with the husk on; it saves time, but the danger from contact with any ordinary garden soil to the skinned corm is not great, as I know from years of experience in growing them so, and I also know that I have bought all or nearly all of the *danger* I now know by planting corms from all sections of the country without giving them a thorough *physical* examination.

One of our correspondents suggests that a list of Gladioli in order of preference would be helpful to the beginners. He suggests that a list of the ten first best be prepared and then a list of the ten second best be prepared. We would be glad to hear from growers along this line, and especially from the larger growers who are growing at least 100 different varieties or more. We look for a great diversity of opinion but suggestions along this line will be helpful. While individual taste has much to do with the selection of the varieties, yet some varieties are so universally liked that they would be selected by many different growers in preference to others. Thus we can get at those varieties which are really superior and worthy of distinction.

Raymond W. Swett advises that he will move his business and entire stock of Gladioli from his present location, Stoughton, Mass., to Saxonville, Mass., where he has bought a farm which is better suited to growing Gladioli and where he will have better mail, express and freight service and improved facilities for handling the business. Saxonville is easy of access and in the same general location of a number of other large eastern growers.

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No. 5

The Poisoning of Soils and the Rotation of Crops.

The article by "A. P. M." in our "Way-side Ramblings Department" this month touches on an important principle which is comparatively little understood and little talked about.

The deterioration of soils as the result of the giving off of poisons by the growth of vegetation is a very positive thing and although not well understood it has been the subject of much study. There is no doubt but what the growing of one crop on the same ground year after year results in a condition which reduces the production to a point where it will be unprofitable. Carried out to an extreme it may result in such a poisoning of the soil as to render the growth of future crops of the same kind on the same ground practically out of the question. This trouble, may, however, be overcome by proper treatment. It is well understood that a rotation of crops is one of the commonest methods of preventing "soil exhaustion," as it is commonly called. Treatment with chemical fertilizers, or liming, may accomplish the same result. Lime especially is a great corrective of acid or poisonous conditions of the soil which result from continual cropping and a large accumula-

tion of humus from one particular class of plants.

It is quite well known that some classes of plant growth are very poisonous or destructive to others, but in just what way is not thoroughly understood, and investigations have been, and are now being conducted along this line. Rotation of crops has been worked out through a long period of experience so that it is quite fully demonstrated what crops do well one following the other, and this is the common remedy for the poisonous condition of the soil as explained.

Gladiolus growers who have had the most experience and handle their growing crops in the best way, commonly rotate with cover crops or green manure crops between the crops of bulbs, not growing more than one or two crops of Gladioli on the same field in succession. Rye is commonly used as a cover crop or green manure crop, but it has been suggested that a combination of rye and winter vetch would be an improvement.

MADISON COOPER.

The low prices which prevail at the present time should encourage those who grew Gladioli in 1914 by the dozens to grow them this year by the hundreds. Those who grew Gladioli by the hundreds in

1914 should grow them by the thousands in 1915.

The greatest satisfaction can be had from growing the Gladiolus by using it as a cut flower, and to get the most satisfaction from the cut flowers you should grow enough to have a bouquet of at least several spikes at all times from the earliest bloom in June until frost overtakes your floral efforts in the fall.

Considerable complaint is heard with reference to the condition of Gladiolus corms which are being received from Holland this spring. This is doubtless due to the fact that shipments are longer in transit. The tight packages and high temperatures at which the goods are held during the shipment results in root growth and in many cases a sprouting of the bulbs as well. This is, of course, a decided loss to the vitality of the corms and those who have had experience understand this. The present state of shipping between America and Europe is largely responsible for the comparatively poor condition in which stock is received this year, but it is also well known that this result has been encountered with many shipments during the past years.

The Editor sometimes takes the liberty of offering suggestions and answering questions on subjects with which he perhaps is not thoroughly familiar and he will not feel at all offended if experienced growers will offer further suggestions or make corrections at any time. For instance, Mr. Cowee in this issue has some things to say about packing bulbs for shipment and his experience is certainly many times greater than that of the Editor. We would be glad to hear from other parties along this same line and along any other line that may be under discussion.

Doubtless many people become discouraged growing Gladioli from the fact that they attempt to grow this beautiful flower in a soil which is impoverished and which is not merely unsuited for Gladioli, but unsuited for most any other vegetable growth. Do not forget that to produce good results in the growing of any kind

of vegetables or flowers or anything else that a soil must be well built up in humus and supplied with the necessary chemical elements as well. Study your soil and treat it according to its needs.

It is a safe rule to apply well rotted stable manure in the fall of the year and spade it in deeply in the spring. Pulverized sheep manure may be applied at any time. Wood ashes and guano may be used judiciously. Deep working and a thorough mixture of any of these things with the soil itself is especially important.

Hyde Park.

(Subject of illustration on front cover.)

This variety is a new hybrid of the Gandavensis type, and is a cross between *May* and the old favorite *Shakespeare*. It was originated by Herman Baer, of New Hyde Park, N. Y., and was introduced in 1914 by Vaughan's Seed Store, New York and Chicago.

The flowers have the same fine, open shape and large size as *Shakespeare*, with the same exquisite coloring in the three upper petals—a frosty, sparkling white, penciled and feathered with light and dark rose, but the lower petals are much more distinctly blotched with cream—which is an added charm. The foliage is clean and healthy, remaining deep green until frost. It is a very early bloomer, making it of special value in the cut-flower market, as it comes in at a time when there is very little competition from other varieties. Certificate of merit, American Institute, New York City, Sept., 1913.

American Gladiolus Society.

The Nomenclature Committee of the American Gladiolus Society has approved the application of John H. Umpleby, Lake View, N. Y., to register Gladiolus *Mrs. A. C. Beal*.

Mrs. A. C. Beal (Umpleby's 385). Color rosy white, blotched Lincoln red, and with the median line shading to old carmine red. A fine color and an attractive blotch. The buds are quite salmony when they first open. Stamen filaments pinkish. Anthers light lavender. The flowers are well arranged. Bloom large, tube curved medium slender, medium long. Segments unequal, connivent, the upper horizontal and broad, the lower reflexed and narrower. Season early. Spike tall, erect, often curved; two or three to a corm, and producing a good number of flowers. Growth vigorous, well furnished with medium broad leaves. Corms large. Originated by John H. Umpleby, Lake View, New York.

WAYSIDE RAMBLINGS.

PACKING GLADIOLUS CORMS FOR SHIPMENT.

TO THE EDITOR:—

I wish to take issue with you on the subject of packing *Gladiolus* corms for shipment. Could you have seen a few years ago in New York, as I did, a shipment of nice large bulbs in barrels with no packing, I am sure you would not wish any shipments made in this manner. In addition to being terribly bruised, the husks were loosened and shredded and presented a sorry mess. You must know that a bruised corm is not as strong as a perfectly sound one, and while planer shavings and other similar materials do afford frost protection to a certain extent, the principal value to me is to prevent bruising. Where no such protection is given, the rough handling by freight and, I am sorry to say, the almost as rough treatment via express as well as mail, permits bruising which is easily and cheaply eliminated, but which, as you state, is somewhat of a nuisance. Long distance shipments without such packing are most liable to heat or form roots and top growth. Therefore, as a prevention against bruising, heating and frost, we have always used packing and prefer in their order, spool turnings, planer shavings and buckwheat hulls.

ARTHUR COWEE.

GERMICIDE FOR PACKING CORMS—POISONING OF SOIL AND ROTATION OF CROPS.

TO THE EDITOR:—

The corms sent me by Mr. Childs were all wrapped separately in (manila?) tissue. It would be interesting to know if it had occurred to any one to try the effect of saturating such paper with a *volatile germicide* for prevention or cure of corms from disease. Such as do not have too large a stock might find such a wrap effective acting throughout the several months from season to season. The peculiar paper, saturated with arnica, used in markets for wrapping meats is a familiar parallel. It is probable that such paper, treated beforehand with bi-chloride or phenol, would be effective with the aphides, (referred to in your March issue), which are so weakening and destructive.

The occasional success of a corm accidentally left in the ground over winter is misleading, and such if purposely left in place again for another season will likely be a failure—perhaps on account of the

accumulation of decay underneath. A fall planting in open ground will also be largely a failure in the number that will show up at all.

As to the rotation of crops, the scientific theory now is that the deterioration of ground is due to the "*excreta*" of the roots rather than to any exhaustion of the soil. This is shown in annuals by the constant extension of the extreme rootlets, the root behind taking a brownish bark as protection against such emanation. See a very interesting discussion of this in a recent pamphlet of the U. S. Agricultural Department on Rotation, free on request to Congressmen. All soils show everywhere sufficient of the elements needed for plant-growth, while the successive crops from replanting fall off in replantings from say a maximum of twenty to twelve, and seven and five.

It would seem as if the blooming periods in England given by "G. C." would compare better with similar lists here if some fifty or sixty days were deducted from the times he gives. In our northern states the corms might be considered as dormant until warmed by a May sun—while his plantings were two months earlier.

A. P. M.

THE TWENTIETH CENTURY FAIRY TALE.

TO THE EDITOR:—

I take pleasure in handing you some comments on the Twentieth Century Fairy Tale:

First, regarding the sporting of bulb-lets, would say that the *Gladiolus* is no different than other plants in this respect. We find mutations in all plant life, but again referring to the *Gladiolus*, whether the change takes place in the cormel or corm, I cannot answer, but I am of the opinion that mutations can and do spring from both sources. As an illustration of a sport in the *Gladiolus*, I will cite *Colvilli Alba*. This variety, being pure white, sprang from a hybrid species whose flowers are scarlet shading to almost purple. A peculiar thing is that we are told that it first sported with two different growers the same year.

There is, however, another important object to be taken into consideration in considering the sporting of *Gladioli*. You will recall that different seasons bring with them different colors in the same flower. For instance, I once grew *Augusta* when in the entire season every flower was as white as the variety *Peace*, which is common to all of us, but the very next season every plant bore flowers heavily marked and striped. Had I not

been accustomed to the ways of this flower I should have been thoroughly convinced that all my stock had sported in one year, as they certainly changed from white to pink. So it might have been with the amateur having but one seedling, or rather seeing the flowers of one plant for the first time, in perhaps an off season, when it again appeared in a normal season, the color of the flowers naturally would change. However, I do not say positively that this is the case. I will also say that when once a mutation has occurred it will not revert to the original.

As to grafting a tomato on a potato: I would say that it is probable as both belong to the same genus, but when it comes to pollinating a Gladiolus with pollen from a lily, this is impossible as they are of different genera. This law of Nature is never broken. If it could be, it would be only a short time until we would have choice apples growing on the current bushes in our back yards. I have no doubt that the amateur used the pollen from the lily in contemplation of crossing the lily and the Gladiolus, but the pollen of the lily being foreign had no more effect on the forming of the seeds in the capsule of the Gladiolus, than would the dust from the street on a windy day.

If the Amateur will experiment further with this subject as follows, he will find that he cannot obtain one single seed from the above cross. Upon the opening of the Gladiolus flower early in the morning, remove the anthers, immediately covering the flower securely with a square piece of tight woven cloth, excluding all insects and floating pollen in the air. When the pistil is receptive, which will be in the late afternoon or early the next day, apply the pollen from the lily covering the flower as before. You will find that no seed will form in the pod.

W. W. WILMORE, JR.

APHIS OR LICE ON CORMS.

TO THE EDITOR:—

In reply to C. L. Williams regarding lice on Gladiolus corms in "Wayside Ramblings" for March, we had a little experience along this line last season. We found at planting time that some corms we had purchased were badly infested with lice, the first we had ever seen in Gladioli. As an experiment we tried one pint 40% solution Formaldehyde in ten gallons of water, soaking the corms (without removing the husks) three hours. There was no injury to the corms and when we dug last fall, they were perfectly clean.

THE COE, CONVERSE & EDWARDS CO.

DOES THE GLADIOLUS SPORT THROUGH ITS CORMELS?

While I can not say there never was a Gladiolus bulblet that came untrue to variety, if I knew I might live until I had knowledge of such a thing, it would be a long time before I would begin to think about making my Will. If I were to buy 10,000 *America* bulblets, and one of them grew up something different, I would say that I had proof as near absolute as proof can be about anything in nature that a stray had got mixed in; and if no more than one stray appeared, I should consider it a tribute to the skill, patience, and eternal vigilance of the man who grew them. The men who can handle crops of a large list of Gladioli without getting some of the stock mixed up with other varieties are few and far apart.

Not only so, but it is impossible to dig a field of Gladioli without leaving large quantities of the spawn in the soil, and I find stray plants in the sites of my old beds several years after the last crop: so, if the same location is replanted the next year, or even a year or two later, there are likely to be strays coming up in the rows with the newly planted bulbs, and there is no way in the world to discover them until they bloom.

The evidence of sporting is far too dubious to convince me yet.

B. C. AUTEN.

PLANTING FORCED GLADIOLUS BULBS.

A local florist tells me that, while he does not successfully force *America* bulbs the second time, he plants them out in the garden and not only gets good bulbs for next year's forcing, but also cuts good flowers. He does not cut much foliage with the flower stems in either case.

GEO. S. WOODRUFF.

GLADIOLI UNDER ARTIFICIAL LIGHT.

I desire to call the attention of Gladiolus lovers to the remarkable improvement in some varieties when seen under artificial light. *Panama* in a dry season is not as beautiful as *America*, but under artificial light it is far superior. *Independence*, while not a poor color, is greatly improved in artificial light. H. W. GROSCHNER.

"GOLDEN WEST" AND "PACHA."

TO THE EDITOR:—

Referring to the March issue, page 36: *Golden West* is to the best of my knowledge and belief the same as *Pacha* and, in fact, is *Pacha* renamed. C. BETSCHER.

Amateur and Professional.

We, as professionals, would say that, in our opinion, the amateur is getting decidedly the worst of it. Because a man sells a few bulbs is no reason for barring him from the amateur class. It is our belief that to be a professional, one must advertise to sell bulbs or flowers or depend wholly on growing or selling in the horticultural trades for his livelihood.

But we should go further than that and divide the amateur class into two grades. First, those who employ professional gardeners, and second, those who do not. Then those of limited means may compete on an even footing with others of their own grade.

If the professionals help the amateurs both by advice and encouragement instead of barring them out of the show room and raising little unpleasantnesses there will be a decided improvement in the amateur class as regards quality of their exhibits. And it is certain that as soon as this improvement becomes noticeable the large majority of amateurs will be seeking newer varieties to be better fitted for competition, and if the professionals have built up the proper fraternal feeling between themselves and the amateur the latter will come to them for advice and their new stock. Where else can they get it in the quantities that will be demanded by the increasing number of Gladiolus enthusiasts?

On the other hand, what harm does it do the professionals for the amateur to trade bulbs or to sell a few. In nine cases out of ten the real amateur (the one who really has got the bug for Gladioli) who sells a few bulbs turns around and puts that money back into stock new to him. That is why he sold the bulbs. If the local professionals are wide awake they can get this money easily. For that reason the professionals should endorse more and larger prizes in the second class either cash or by donating stock as one Ohio firm did this season. I wager that was a profitable advertisement for them.

We agree with Mr. Adams that buying and selling as a side line without advertising does not make a professional. But we hate to believe that jealousy is the cause of this questioning one's standing. We believe rather that it is due to lack of a proper appreciation of the value of the amateur as an amateur. We have never felt jealous because an amateur brought in a few blooms to beat ours. It is to his credit. I have seen in gardens containing only a dozen or so bulbs, single specimens of which any professional

should be proud. And in the show room amateurs have come up and said that they had a bloom last week to beat the average in our exhibit. That is no doubt true, but it is not necessary to remind him that last week's single spike does not win this week's prize calling for 25 of one kind. Keep on good terms with the amateur.

It is our experience that most amateurs are cranks and personally I enjoy handling a crank, who, in writing, is positive what he wants and just how he wants it. He lays down the law as to methods of packing, marking and instructions enough on shipping to leave but one course open. Then when the deal is closed he says he is pleased with his treatment.

As to amateurs losing time in setting up his exhibit, why not have the show committee appoint local florists to set them up for them. Or, if the proper feeling existed between the amateur and professional the latter would be better able to set them up, for as a rule they better understand the value of the different varieties. This was very noticeable in the Boston show where a florist set up one grower's exhibit, striving all the time for color and artistic arrangement. As a result one of the largest advertised varieties, one everyone was looking for was in a back corner out of sight.

So we believe it is to the best interests of all concerned for the professional to encourage the amateur all he can both in growing what they have and in trying to get new varieties, even if they sell a few bulbs to do it. Keep them amateurs and foster any fraternal feeling there may be so that their interest in floriculture will grow. If the professionals properly help and encourage the amateurs then the professionals can take care of themselves. It hardly seems possible for an amateur who cuts any figure in the trade of a professional to long remain an amateur.

R. W. SWETT,
(Professional.)

George S. Woodruff, Independence, Ia., has issued a revised edition of his catalogue "The Modern Gladiolus." It is an improvement on the old edition and the description of varieties is valuable for reference purposes. Mr. Woodruff lists a number of varieties not commonly grown and the prices are given on a separate leaflet enclosed with the catalogue. A copy can be had for the asking. The magnificent photograph of the variety, *Mrs. Frank Pendleton* on the cover is, in itself, worth sending for. Mr. Woodruff's catalogue has other distinctive features which are interesting.

HINTS FOR THE BEGINNER.

BY FRANK S. MORTON

PLANTING, FERTILIZING AND MARKING.

Now is the time to start putting the bulbs into the ground and some at least should be planted at once. As soon as the frost is well out of the ground is the best time to plant Gladioli, but as their period of growth from planting to blooming is from about 65 days for the very earliest up to about 125 for the latest, planting can be continued up to as late as June 10th with fair chance of success. But it is a well established fact that early planting secures a good root growth which is a great aid in carrying the plants through unusual conditions in the hot season.

If the soil is sandy and well tilled the bulbs may be put as deep as six or seven inches; if heavy, a little more shallow, and with an extra precaution of covering each bulb with a handful of sand before replacing the soil. The best results come from sandy soil, but if not available the handful of sand will help out wonderfully in heavy soil. The bulbs of different varieties vary much in vitality. Some seem to be able to push up through any depth of soil under any conditions; others are more liable to be affected by adverse conditions so it is well not to cover in all the earth at once, especially if the planting is done early, but to leave part of the earth to be filled in after the sprouts are above ground.

As we are considering the planting of a limited number of bulbs only and not taking up the matter of planting in a large way the matter of plows and cultivators may be entirely eliminated and the question of hand tools only considered. Therefore use shovel or trowel or even a hoe to dig a trench at the depths above mentioned and before placing the bulbs, put a little fertilizer in the bottom. This is a very important part of the process, although very simple. A good potato fertilizer, or any all around garden phosphate is all right, but don't use too much. A handful is a great plenty to cover a place six inches wide by two feet long. Sprinkle all over the bottom of the trench and dig into the earth with a hoe or trowel, mixing earth and fertilizer well together. Then cover with an inch of dirt. On this prepared surface place the bulbs, flat side down and the stem side up. They may be planted as near together as the diameter of the bulb only. If land is plenty give twice that space. A single or double row can be planted,

the latter being more economical of room. They will also do all right if the bottom of the trench is covered with bulbs which will make a row six or eight inches wide. Between the rows a space at least two feet should be left for the purpose of cultivating and for the passing among the flowers when in bloom.

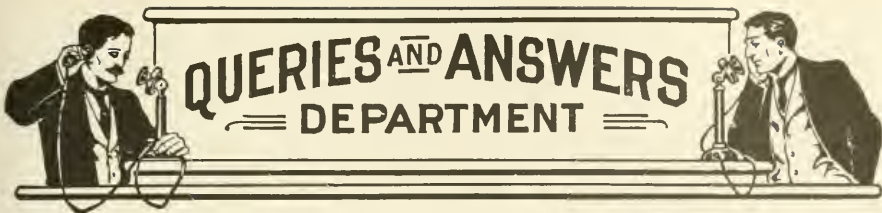
The varieties may be kept easily separate by use of markers made from shingles split up into small width or an old orange crate will make good ones as the wood is thin and splits easily. Use a good pencil and if the writing is scored well into the wood it will last through the season, or at least until the plants are up and can be tagged. A hard indelible pencil will make a mark that will withstand rain and all kinds of weather. If there are only one of a kind and several kinds, plant in lots of ten, making a list of the order in which they are laid. Place a marker every ten bulbs, indicating what list of bulbs is marked. Then when the plants are up, a reference to the list will identify the plants and the tags can be attached to the stalk.

If a long blossoming season is desired, plant at intervals. But there is a great difference in the blooming of different bulbs of the same varieties, so ordinary planting will cover a period of blooming of four to six weeks. A few should be started extra early and a few extra late if this period is to be prolonged.

With the bulbs well covered as directed, nothing more will be necessary until next month. By that time the sprouts will be looking above ground although one must not be discouraged if it takes a full month or a little longer for some of them to make an appearance.

Those who have grown Gladioli for several years and studied the subject even roughly understand that to have the very best bloom that it is necessary to plant young bulbs. Continued planting of the old bulbs year after year leads to a "running out" in most cases which is discouraging. Therefore, save the cormlets or bulbets and plant them as you would peas each year and thus you will have future young bulbs of best bloom each year. The life history of a Gladiolus from seed to old age is an interesting subject which has been written about by Mr. G. D. Black. An article on this subject we have already in type and hope to be able to use it in the June issue.

Don't expect fine bloom and plump bulbs for next year's bloom if your soil or culture is defective.



QUERIES AND ANSWERS DEPARTMENT

[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Angle Worms in Soil—Various Questions on Growing Gladioli— Fertilizers, Etc.

TO THE EDITOR:—

The soil in my Gladiolus beds contains many angle worms, and when the bulbs are taken up in the Fall, two or three will be found coiled around nearly every bulb. Would the result be any better if the ground was free from worms?

How can they be gotten rid of?

Would an application of lime be of benefit to the soil?

How should this be applied, and what quantity is it best to use on beds of 100 square feet?

As my space is limited I am obliged to plant rather closely. Stable manure is spread over the beds every Fall and spaded in and a couple of applications of pulverized sheep manure is given during the growing season, about half a trowel full worked into the ground around each bulb. Is too much fertilizer being used?

Would it be advisable when planting the bulbs to mix either pulverized sheep fertilizer or bone meal with the soil or should neither of these come in contact with the bulb? The soil was originally a rather heavy clay but have got it in fair condition by spading in sifted coal ashes and stable manure.

D. S.

Answer:—When the weather is very wet in the fall there are always quite a lot of earth worms in the soil. They doubtless do some damage but I cannot see that it is anything serious as to compare with white grubs and cut worms which certainly make a lot of trouble in places. Having no experience with them I cannot suggest a remedy except to recommend the use of hard wood ashes in small quantities.

This also to some extent answers your question about application of lime. If you use hard wood ashes they will contain enough lime to give you plenty for the soil. Roughly speaking, you should not use yearly more than one to two pails full of hard wood ashes to every 100 square feet of garden. Extreme caution in the use of chemical fertilizers is desirable.

Your plan of using stable manure spread in the fall and spaded in is noted, but the spading should not be done until spring. Exposing the manure to the ele-

ments during the winter seems to be just the right thing and the liquids percolate through the soil when it thaws out in the spring, and if there is no frost in the ground this action goes on all winter. You should spade very deeply. Your use of pulverized sheep manure is noted, but possibly you are using too much. A half a trowel full looks like quite a quantity for a single bulb. You doubtless have your soil in pretty good shape now and a little more caution along this line for another year, and the use of hard wood ashes as suggested will give you not only the lime but phosphoric acid and potash as well.

It is poor policy, generally speaking, to allow any kind of fertilizer to come in direct contact with the bulb, but damage may not result. Where the fertilizer is especially beneficial is below the bulbs where the roots grow, and therefore deep spading or ploughing is absolutely necessary if you plant at the approved depth of 4 to 6 inches. It is necessary to allow 2 to 4 inches below the bottom of the bulb for root growth. Deep working of soil is important in growing Gladioli, perhaps more so than in most any other flowering plant, owing to depth of planting and the extensive root system. Your use of sifted coal ashes in the heavy clay soil is quite correct and if you keep up your application of stable manure, not forgetting that you can overdo this, your soil should remain in good condition by the use of wood ashes as above suggested.

Additional suggestions are requested if any reader has different ideas on this important subject.

MADISON COOPER.

Treating Gladiolus Corms with Formaldehyde.

TO THE EDITOR:—

In the March 1914 issue of your paper in an article on "Treating Diseased Gladiolus Bulbs," Mr. G. D. Black describes his method of using formaldehyde. This interests me as I have some to treat, and wish to ask two or three questions on the subject.

First, when does he so treat his bulbs, at planting season or earlier, and if at planting time does he dry them out after immersion or plant them wet?

W. A. E.

Answer:—We treat our bulbs at planting time and plant them as soon as convenient after treatment. Formaldehyde loses its strength by evaporation, so we would naturally expect better results by planting soon after treatment. We find that old bulbs require a longer immersion than young planting stock. Twelve hours is none too long, and a solution of one pint of formaldehyde to 20 gallons of water none too strong. We also treat the bulblets by soaking in this solution two days.

Fortunately we have had no experience with the Gladiolus bulb rot. Our treatment has been to control the disease that we call scab, which makes the bulb rough and unsightly but does not seem to impair its vitality very much.

G. D. BLACK.

Meaning of "Black Bulblets."

TO THE EDITOR:—

Kindly inform me through the columns of your paper the significance of "black bulblets," which I see advertised in trade papers. In what way do they differ from other bulblets?

J. A. G.

Answer:—The term "black bulblets" as applied to Gladioli refers to the small growth, known as cormels or cormlets which form at the base of the new bulb. These are of one season's growth only, and are usually dark brown or black in color, but not necessarily. Some bulblets are in fact quite light colored. The expression "black bulblets" is like some other common terms not at all strictly correct, but has claimed authority by long usage. A better term to use is cormels or cormlets without designating color as it is quite misleading to call these little fellows black.

Potato Fertilizer for Gladioli.

TO THE EDITOR:—

What "potato fertilizer" should I use? I did not spade my patch last fall. Should I dig in the fertilizer or sprinkle it on the top after spading and then rake it in?

W. H. H.

Answer:—The war in Europe has cut off our commercial source of potash, so that the manufacturers of fertilizers have had to cut down the amount of this ingredient in their potato and general high grade fertilizers from 50% to 60%. The analysis of the brand I have found to be most satisfactory is made up as follows:

Nitrogen, equivalent to Ammonia	4%
Available Phosphoric Acid, - - -	6%
Total Phosphoric Acid - - -	7%
Potash soluble in water - - -	10%

It is possible that you can obtain of your dealer something that will be close to the above analysis, left over from his last year's supply, and this will be the best thing for you to do, unless you can buy the materials separately and mix them yourself.

Scatter the fertilizer along the bottom of the drill, and mix it with the soil, using for this work an ordinary spade fork. If thoroughly mixed, it will not be necessary to draw in any more soil to cover the fertilizer before setting the bulbs.

L. MERTON GAGE.

American Gladiolus Society.

Additions to the Preliminary Schedule of the Fifth Annual Exhibition of the Society as given in the March and April issues of THE MODERN GLADIOLUS GROWER.

OPEN CLASS

THE GARDEN ASSOCIATION, Newport, R. I.

	1st	2nd	
No. 35—\$20	\$10—	Best 25 spikes	any white variety.
No. 36—20	10—	" "	Red, or shades of red variety.
No. 37—20	10—	" "	Yellow variety.
No. 38—20	10—	" "	Blue or lavender variety.
No. 39—20	10—	" "	Pink or shades of pink variety.
No. 40—20	10—	" "	Any other color.

HITCHINGS & Co., Elizabeth, N. J.

No. 41—A Silver Cup, value \$10—For the most artistically arranged basket or hamper of blooms—not more than 25 spikes.

FIRMA P. VOS MZ, Sassenheim, Holland.

	1st	2nd	
No. 42—\$6.00	\$4.00—	Best 3 spikes of	Clear Eye.

President Fairbanks has appointed T. A. Havemeyer on the Exhibition Committee.

The regular schedule of prizes will be published in the July number of THE MODERN GLADIOLUS GROWER. Those wishing to offer special prizes are advised to notify the secretary without delay.

Statement of the Ownership, Management, Circulation, etc., required by the Act of August 24, 1912, of THE MODERN GLADIOLUS GROWER published monthly at Calcium, N.Y., for April 1, 1915.

Editor, Madison Cooper, Calcium, N.Y., Managing Editor, Madison Cooper, Calcium, N.Y., Business Manager, Madison Cooper, Calcium, N.Y., Owner, Madison Cooper, Calcium, N.Y.

Known bondholders, mortgagees and other security holders, holding 1 per cent or more of total amount of bonds, mortgages or other securities. None.

(Signed) MADISON COOPER.

Sworn to and subscribed before me this 20th day of March, 1915.

[Seal.] (Signed) C. L. HILDRETH.
Notary Public.

(My commission expires March 31, 1916.)

THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.

Published Monthly by Madison Cooper, Calcium, New York.

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No. 6

This splendid variety was first introduced to the flower loving public in 1909 by the late Mr. Frank Banning, Gladiolus Specialist, of Kinsman, Ohio. The flowers are of large size, often $4\frac{1}{2}$ inches in diameter, and in color are a delicate cream shade, with the two lower inside petals blending to canary yellow. This color is adaptable for any purpose, whether it be for wedding decorations, center piece or table bouquet, or for a funeral emblem. The flower spike is very erect and stout and is wrapped with broad, dark green foliage.



During the years since its introduction it has achieved a world-wide reputation, and has become very popular. It was awarded Certificates of Merit from the Mass. Horticultural Society, Boston, and Dutch Bulb Society at Haarlem, Holland in 1911, and open class award for finest yellow from the American Gladiolus Society in 1912. Since that time it has been exhibited on hundreds of occasions, and has always made a creditable showing. *Niagara* will doubtless long remain a favorite and much admired variety.

GLADIOLUS—NIAGARA.

The Gladiolus Manual.

By W. W. WILMORE, JR.

CHAPTER II. (Continued.)

Gladiolus Species.

G. gracilis (slender). A pale lilac species bearing but two or three flowers on each spike, it grows 18 to 24 inches high. The flowers carry a heavy dark blotch on the lower petals. Was introduced in 1800 from the Cape; blooms in May.

G. Grandis, Thunb. (*G. versicolor*, Andre). Stem slender, two feet or less; lvs. about three, linear or nearly terete, strongly ribbed: fls. six or less, three in. long, with a curved tube; segments nearly equal, oblong-lanceolate and cuspidate, as long as the tube and twice longer than the stamens, recurved and often wavy, yellowish or creamy, tinged and striped with purple-brown; seeds winged.

G. hastatus (spear-shaped). The flesh colored flowers are borne on stems one foot long, the lower petals are marked with dark pink. Was introduced in 1846 from South Africa. Blooms in May.

G. hirsutus (hairy). A very fragrant species resembling somewhat the scent of the hawthorn. It varies in height according to its situation and surrounding conditions. Introduced in 1795 from the Cape. The flowers are dark pink, produced on one side of the stem; blooms in June.

G. hyalinus (glassy). This species was introduced in 1825. The flowers are yellow marked with red, the foliage is bright and glistening, growing one foot in height.

G. illyricus. This species is sometimes regarded as a variety of *G. communis*. It is found wild on the Isle of Wight, England, in the new Forest. Nothing further of importance is mentioned of this plant.

G. imbricatus (brick-colored). This species is found in Russia. Was brought into cultivation in 1820. The flowers are a brick red, growing one foot in height. Blooms in June.

G. insignis. A species not familiar to the writer, is listed by one of the leading Holland growers but description is lacking.

G. involutus (coated). A pink flowered species attaining a height of 18 inches. The flowers are produced in June; was introduced in 1757.

G. Kirki (Kirk's). A species with rose colored blossoms, produced on stems 28 inches long, was brought from Grahams-

town in 1890. Very little is said regarding this species.

G. Kotschyanus. A native of Afghanistan and Persia. The flowers are produced sparingly on stems 16 inches long. The color is a light violet slightly marked; was introduced in 1842; blooms in May.

G. Kunderdi. A ruffled strain of American production. (See Chapter III.)

G. Leichtlini (Leichtlins'). A carmine and yellow flowered species from Transvaal, South Africa. Introduced in 1889. It is mentioned by one writer as losing all individual characteristics when crossed with species other than *cruentus*. With this cross it makes a very charming scarlet flowered hybrid. This species must not be confused with the *Leichtlini* Hybrids.

G. Lemoinei. A hybrid strain of Gladioli originated by Victor Lemoine of Nancy, France. (See Chapter III.)

G. Mackinderii (Mckinders'). A red and yellow species of late introduction was brought from the Cape in 1905, it attains a height of 18 inches; blooms in May.

G. Milleri (Millers'). The flowers of this species are violet colored, produced on stems 18 inches long. Was introduced in 1751. Plant comes in bloom late in May or early June.

G. Mortonius. A white flowered species slightly marked with dark colors. It blooms in early summer attaining a height of 18 inches. Introduced in 1837.

G. namaquiensis. An orange flowered species noticed first in 1800. The plant grows 10 inches high. The flowers are produced in June. Little is mentioned of this species of importance.

G. Nanceianus. Hybrid strain of *G. Saundersi* x *Lemoine* Hybrids. (See Chapter III.)

G. Nanus, Hybrid varieties of two or more of the following: *G. tristis*, *G. cardinalis*, *G. blandus* x *G. Colvilli*. See Chap. III.

G. Natalensis (from Natal). This species is considered by some authorities as being identical with *G. psittacinus*. It is a native of the Natal River, East Africa. It grows four feet in height; the flowers are scarlet and yellow. Introduced in 1830.

G. ochroleucus. A Southern African species from Transvaal. Very little is recorded in regard to this plant.

G. oppositiflorus. The flowers of this species bloom on opposite sides of the spike. It was brought from Madagascar in 1843 and was used by the early hybridists in crossing. Its characteristics are found in many of our present day varieties. It is considered as a parent of the Gandavensis strain; blooms in May.

G. papilio. There are two varieties of this species, one white, the other purple with yellow markings. It grows two feet in height, was introduced in 1866 from Cape Good Hope. It is without doubt a parent of the well known *Lemoine* hybrids. Introduced in 1877-1880. The variety *Baron J. Hulot* shows a strong resemblance to this parent.

G. preacox. This Gladiolus is regarded by many seedsmen and is listed in many seed and plant catalogs as an annual. Although it flowers the first season from seed, it is no more than a selected strain of early flowering *Lemoine* Hybrids. It is supposed to have originated with Hagge & Schmidt, seedsmen, Germany.

G. premeabilis. The flowers of this species are of an orange shade, medium in size and well formed. It was introduced in 1825 from South Africa; plants grow from 9 to 12 inches high. Flowers are produced in June.

G. primulinus (Maid of the Mist). A clear yellow flowered species which is perhaps the most noted of all recent introductions. The flowers are of the color mentioned, hooded in form, produced on spikes three feet in height. They are arranged on one side of the spike. Was brought from Victoria Falls, South Africa, in 1890. It possesses a character not common to all species, transmitting its color to all of its seedlings, producing the most beautiful shades of orange, salmon, salmon-pink, yellow, straw, and gold, also many intervening colors. It is undoubtedly a species that will play an important part in the future in Gladioli of its color. The corms are comparatively hardy and will stand the treatment of our common garden varieties.

Mr. A. E. Kunderd of Goshen, Ind., has used this species in crossing with his new race of ruffled Gladioli, known as *Kunderdi*. In his crosses a hybrid strain has been produced giving 50% ruffled varieties. Other crosses have been attained but none as yet are as striking as those mentioned.

G. psittacinus (parrot). This plant resembles greatly the species *Natalensis* and comes from the same country; is also a

parent of the Gandavensis type. It is more hardy than the Cape species and is in common with the other species of this section. The flowers are intense scarlet borne on stems 36 to 40 inches long. With slight protection the corms will survive the ordinary winter. Was introduced in the early part of the 19th Century.

G. pudibundus. A hybrid from a cross between *G. blandus* x *G. cardinalis*; this hybrid has the constancy of the species, the flowers are large, produced on long heavy stems; plants grow three feet in height, the color being a rose shaded darker.

G. punctatus. Flowers of this species are of a dingy-yellow marked with bronze-purple. Was first noticed in 1889, grows 18 inches high; blooms in June.

G. purpureo-auratus (purple-flowered). This very important species is a parent of the famed *Lemoine* hybrids. The flowers are not in reality beautiful, the color being yellow blotched with purple. In all the hybrids the heavy blotch is perhaps the most striking feature. The plant stands three feet in height, flowering in midsummer; was introduced from Natal in 1872.

G. quadrangularis (four channeled). This species is not described as far as the writer can determine.

G. Quartinianus. Rich. Strong, 2-4 ft.; lvs. 3-4, rigid, sometimes nearly ensiform; fls. 4-9, in an open spike, large, the narrow curved tube $1\frac{1}{2}$ in. long; upper segments hooded, the others smaller and more or less reflexed, bright yellow or yellow flushed and feathered with scarlet. Mts. of Trop. Afr. Not known to be in the Amer. trade, but attracting attention in Europe. One of the best of the genus.

G. ramosus (branching). According to C. L. Allen, a well known and accepted authority on bulbous plants, *G. ramosus* is the first of the genus. The flowers are of a rosy blush color, heavy carmine stains adorn the three lower divisions. Its tall, branching habit give it a succession of bloom. The flowers are large and beautiful; produced during July and August. It has been used a great deal in cross breeding, imparting its general character to all its descendants. It can be planted only in the fall. When planted in the spring the plants throw but few if any blooms. For this reason it is little known. It comes from Cape Good Hope, the date of introduction not certain.

G. recurvus (recurved). A tall growing, graceful plant, producing from three to six purple flowers of small size, the sheath is white mottled brown; the fragrance is somewhat like that of the violet;

grows two feet high, blooming in early June. Was introduced in 1758 from the Cape.

G. salmonensis (salmon-flowered). A pretty species from Cape colony attaining a height of two feet. The flowers are of a pleasing shade of salmon, slightly scented. It is an early flowering species used by many florists for forcing.

G. Saundersi (Saunders'). Another important species, grows two feet high, bearing scarlet flowers with conspicuous pure white throats, it is a parent of the well known *Childsi* strain, was introduced from South Africa in 1871. The corms are nearly hardy and well worthy of cultivation.

G. segetum (round-seeded). This species grows largely in Southern Europe, was once used pharmaceutically in this country and in England, was introduced in 1596. The flowers are purple, growing about two feet in height, producing its blooms in July. It is perhaps the oldest species known, excepting *communis* which was introduced at the same time, both being employed in medicine.

G. sericeo-villosus. Introduced from So. Africa in 1864. The flowers are a yellowish color, being borne on spikes three feet long.

G. stagitalis (unable to describe).

G. suaveolens (fragrant). A species suitable for greenhouse culture only. The flowers are a straw color and extremely fragrant. The plant attains a height of 12 inches, producing its flowers in April. It is a native of the Cape of Good Hope.

G. sulphureus. Same as *G. adlami*.

G. tenellus. A species probably from Cape Colony, was introduced in 1825. The flowers are yellow, plant grows 12 inches high, blooms in June.

G. tenuis (tender). Was brought from Tauria in 1823. The flowers of this species are red with slight markings, borne on stems 10 inches long. The plant is very tender and can seldom be grown out of doors. Natural season of bloom, June.

G. trichonemiflorius (trichonema-flowered). (The trichonema is a crocus like flower found wild in Southern Europe and Southern Africa.) This species is sweet scented not unlike the fragrance of the violet. The flowers are yellow, blooming in June. It was first noticed in 1800.

G. trimaculatus (three-sided). A species with red and white flowers, produced in June on stems 12 inches long. The date of introduction 1794.

G. tristis (sad). A species with drooping flowers, was used in early crossing, and considered by some authorities as a parent of the *Colvilli* and *Nanus* varieties. The flowers are tan colored produced on

spikes 10 to 12 inches long; was introduced in 1745 from the Cape. *G. tristis* x *G. cardinalis-Colvilli* and varieties.

G. turicensis. A hybrid species resulting from a cross between *Gandavensis* and *Saundersii*.

G. undulatus (wavy) Upon investigation of this species I find two distinct colors given, one as pink the other as pale yellow, carrying a broad red stripe through the center of each petal. It may be that the species consists of two or more varieties as do several others. However, as the writer is not familiar with either, it would be hard for him to say which is correct, or both if there be two varieties. The flowers are produced on stems 12 inches long, was introduced in 1760 from Cape Good Hope. Blooms early in June; rarely cultivated.

G. ventricosus (see *cuspidatus*).

G. versicolor (various colored). A variegated species growing 16 inches high producing flowers of red, brown, and brick. Flowers are produced in June; introduced in 1794.

G. vinulus. A white species feathered with purple; was introduced in 1888. It attains a height of 18 to 22 inches. Is used extensively for forcing, being an early bloomer.

G. viperatus (vipers-head). This singular species is named from the resemblance of the flowers to that of a viper's head. They are of a greenish-gray with dark stripes. Its oddity is its redeeming feature. The plant was introduced from Cape colony in 1887; the blooms appear in May, being borne on spikes 10 inches long.

G. vitriacensis. A hybrid, the result of a cross several early flowering species x *Lemoinii*.

G. vittatus. An early blooming dwarf species attaining a height of 10 inches. Flowers are salmon. It has been used in hybridizing but generally the seedlings are small and inferior.

G. watsonioides. A species similar to *G. Watsonius*. It is found wild on Mt. Kilimanjaro, Cape Good Hope; was introduced in 1887. The flowers are scarlet, produced in June on spikes 18 to 20 inches. It is best treated as a fall bulb, being planted in frames or with protection from cold.

G. Watsonius (Watsons'). A very early blooming species used largely for winter forcing. The flowers are an orange red. Plant grows about 16 inches high, corms are nearly hardy and will live over winter with protection. Should be planted in the fall.

[Continued on page 84.]

MRS. AUSTIN'S TALKS FOR AMATEURS.

GLADIOLUS CHATS—PREVENTING WEEDS— CHRYSANTHEMUMS.

A message over the telephone:—"I thought I would call up and tell you that my Gladioli are two inches high. I planted them just before that unusual hot wave in April which seemed to almost pull them through the soil. I want them to keep on growing fast. How shall I treat them?"

In passing the home of a friend:—"Can't you come in a minute and see my Gladiolus garden? I think so much of it, but it is so hard to keep the weeds out."

A letter from a colder climate:—"We are just about to plant Gladioli and anticipate much pleasure and we hope some profit from our venture if we can keep expenses down in the growing of them."

From sunny California:—"We had our first bloom April 15th." And from far away Australia:—"What is the earliest and latest date you folks in America have bulbs for sale? We plant here from 1st of August (end of winter) to about 1st of February (end of summer)."

From a Wisconsin florist:—"We are seeking a flower which has in combination the class of colors of our University. What have you to suggest?"

The above are samples of a day's queries and messages, which go to prove that the Gladiolus is becoming more and more popular and that even if the growers will not co-operate in universal advertising, that the Gladiolus is fast spreading over the world. It seems as if the air is full of Gladiolus ideas and fancies, and how we do enjoy these chats and the keeping in touch with those friends and growers who love our favorite flower. We like to meet people whose greeting is, "How are you and how are the Gladioli," just as if the flowers were members of the family, for we know such people are interested in them as much as we are, and when one possesses that feeling of personality about Gladioli and realizes that they are living, growing creatures, placed here for our pleasure, he knows intuitively their needs. He would not allow a member of his family to be smothered or starved or to die of thirst, and neither would he allow his Gladioli to struggle for existence amidst a mass of weeds or in a barren soil and without sufficient moisture. Those who have been growing Gladioli for several years have learned from experience quick and easy methods. They no longer pull

weeds, for experience has taught them that it is better to prevent their growth and thus have no weeds to pull. How to keep the weeds down is the most frequent of all queries. It reminds me of the great question in the kitchen: "How to simplify the dish washing," and which I wish might be as easily solved as the question of weeds in the Gladioli.

Most of us have some or all our Gladioli planted by this time and, we suppose, of course, the ground was well worked over previous to planting and, we hope, well ridged up, but if you forgot to ridge them, do it now for this ridging is the first step in the prevention of weed growth after the bulbs are in the ground. Do not be afraid to ridge them high for in a few days, they must be worked over with a weeder which will level the ridge and destroy the net-work of tiny weeds starting into growth.

Weeds are not easily discouraged, and as the weather becomes more favorable they will put forth greater effort to come again and we must ridge the row high again. Alternate ridging and leveling will practically prevent weed growth, and the occasional one that survives can be easily pulled out. Remember to rake crosswise of the rows with the garden rake to break the soil between the plants and leave them standing straight and free like an army of soldiers.

This absorbing interest in the Gladiolus, its culture, etc., reminds me not a little of the chrysanthemum fever that raged in our hamlet. Some over twenty years ago a band of determined women decided to organize a Chrysanthemum Association and have an exhibit with the view of raising money for church purposes. A chrysanthemum show at the time being something novel and unusual in this vicinity, proved to be a decided success and a goodly sum was realized. But it did something better, for the little band of women, some 15 or 20, became thoroughly interested in the culture of the chrysanthemum and with no greenhouse facilities whatever attained a success that would have been a credit to many a professional florist. Farmhouse parlors formerly dedicated to weddings and funerals were stripped of their window shades and carpets and used for housing the plants when weather became too frosty out of doors. The main topic of conversation at all gatherings was the chrysanthemum and upon meeting the salutation was invariably: "How are your chrysanthemums," or more often cut short to "mums." The fever raged for ten years, each show eclipsing the previous one and attracting the attention of

professionals all over the state. It revolutionized all social activities in our hamlet, and its power was wonderful in the uplifting and betterment of rural life. Although the shows are not now kept up, their influence still lives and there are few homes in this vicinity that do not have at least a few chrysanthemums.

MRS. A. H. AUSTIN.

Amateur or Professional.

BY JAMES M. ADAMS.

In taking up the February issue of THE MODERN GLADIOLUS GROWER I find a letter from my old New Haven friend, J. H. Slocombe, entitled "Amateur or Professional," in answer to my article in the November issue. He says:

"Mr. Adams states that he had '500 dahlia plants,' (a pretty good collection for an amateur.)" He says, 'I cannot hope to enter into competition with growers of acres of dahlias.' Then how can an amateur with a dozen and a half plants compete with him? Then he asks, 'What incentive has anyone to grow flowers and show them? And where will the professional growers be if they have no amateurs to sell stock to?'"

Now, let's see what I did say in the November issue. Here it is: "A few years ago I had some 500 dahlia plants on an adjoining lot, but as the lot was sold I had no place to plant them the next season, so I sold some that spring and the following spring until I have less than a dozen clumps of bulbs to house. I had given many away, but I wanted some Gladioli and so sold my dahlias to get some money to buy my Gladioli. And now they tell me I am a professional because I sold a few bulbs." Now if such is a fact, which I contend it is not, what am I, and where am I? As a professional, surely, with a small city garden spot, 70 by 30, I cannot hope to enter into competition with growers of acres of dahlias or Gladioli, and, therefore, am shut out entirely," etc. Mr. Slocombe then goes on to tell of his experience with amateurs. He says he sold coreopsis at 40c. per 100, an amateur came into market and sold for 10c. per 100, 300 for 25c. Mr. Slocombe quit. Last year he supplied the market with blue corn flowers at 50c. per 100. Again an amateur sells for 25c. per 100. Mr. Slocombe dug up his plants and quit. He sold Gladioli for \$2.00 per 100. Some amateur undersold him with inferior stock. Also with pansies he had the same experience, etc. But how does this answer my question? It certainly is no answer at all.

Now I consider I am only an amateur, and let me say that my dahlia bulbs were sold to a wholesale nurseryman, on orders for no less than \$1.00 a dozen. He got \$2.00. I sold a few hundred spikes of Gladioli. How much? Not \$2.00 per hundred, but 50c. to 60c. a dozen. Again he says, "How can a grower with one and one-half dozen dahlias compete with my 500?" Let me ask how many with 18 plants would be so foolish ever to attempt to make a show? What class could he fill?

Mr. Slocombe surely must be easily disheartened in marketing his flowers and trying to compete with amateurs. But surely if they had enough to compete with him, could they be amateurs purely? I know what Mr. Slocombe raises, and I know the quality of his dahlias, Gladioli, violets, sweet peas, cosmos, etc., and you can't beat them. He should have kept right on. He would soon see that people want quality not quantity at low rates. His "amateur" competition only lasted a season or so. "Amateurs," were they? I doubt if they even loved flowers, but were probably like many people. They saw some one else making a dollar and they thought they would try—and failed.

What would Mr. Slocombe have the amateurs do with their surplus stock of bulbs or flowers? I have one variety of Gladioli of which I bought 60 bulbs. How many little ones did I get that fall from them? Only 4,024 by actual count! Of course that was an exceptional case. Would he or other professionals have me give them all away, or throw them in the dump? Would he and others have me give all my flowers to all my friends and neighbors? Wouldn't that hurt the sale of his or other professionals' Gladiolus blooms? I think it would. And yet I plead guilty to that. Yes, many sick friends, or for that matter, sick strangers, have been cheered by the flowers from my garden, and I feel fully repaid for my labors if I can lighten the sorrows and sufferings of any one in that way.

I was glad to read of the Royal Horticultural Society's definition of an amateur. Why should not the American Gladiolus Society adopt it and once for all settle the question definitely? What do you say?

New beginners in the growing of Gladioli should remember that it is not too late any time during the month of June to plant for September bloom. Those who cater to the cut flower market regularly reserve a portion of their corms for June planting.

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Widening the Scope of The Modern Gladiolus Grower.

From time to time our friends have offered the suggestion that the good work which we are doing for the Gladiolus could to advantage be duplicated with other flowers, and while we have no intention of spreading our efforts out so thinly that we cannot cover well our chosen field, it is our intention to print from time to time information and facts regarding other summer flowering plants as well as the Gladiolus. As an illustration of this: Next month we will print an interesting article with illustration by Mr. W. E. Fryer of Mantorville, Minn., on "The Iris." While Mr. Fryer makes a specialty of Gladioli he grows a number of the other outdoor flowers as well and has given much time and study to the breeding of Phlox, Delphinium, etc., as well as to Gladioli.

Those who are growing Gladioli as a specialty are usually interested also in the Peony, the Iris, the Dahlia, the Phlox and the Delphinium, as well as other flowers which come in for a share of the Gladiolus enthusiast's attention. Therefore, our friends may expect the appearance in THE MODERN GLADIOLUS GROWER,

from time to time, of useful and interesting articles on other outdoor flowering plants as well as the Gladiolus, and we solicit interesting and useful matter along this line for publication.

MADISON COOPER.

Root, Bulb or Corm.

Every time the practical man makes a slip, there is always some captious scientist near to call his attention to it and set him right. Therefore, I might as well beat the others to it and point out that the part of the Gladiolus which one plants in the spring, is not a root, however much authorities may differ as to whether it be a bulb or not. Webster's quoted definition of a corm as "a solid bulb-shaped root" is absolutely wrong. The Gladiolus corm is a stem and nothing else. When planted, it produces roots from the base and branches from buds located at various places on it, just as other stems do. When the old corm dies, new corms are formed at the base of these branches from material made in the leaves. A bulb, on the contrary, is mostly leaves. Split an onion bulb lengthwise and you will find the stem—a very short flat object near the base.

There are a good many words in our

language that have several meanings. There is first the original sense of the word and then additional meanings that common usage has read into it. Strictly speaking, the Gladiolus stem is a corm; in the language of the gardener, it is frequently a bulb or even a root. The same usage occurs in reference to other things. Nearly everybody speaks of herbaceous perennials as coming up from the roots in spring. They really do nothing of the kind. They come up from buds on the underground stem. With the exception of a few species that can originate new buds on roots, no plant can come up after the stem is destroyed. But even if we may allowably speak of Gladiolus bulbs or roots, when we mean the Gladiolus corm, why not keep our definitions as distinct as possible and call the object by its right name. If we call it a bulb how shall we distinguish the underground parts of the lily, hyacinth or onion?

WILLARD N. CLUTE.

The use of Gladioli for decorative purposes has not been given the attention that it should have had. In our "Way-side Ramblings" Department this month "M" asks some very pertinent questions which we hope will have the consideration of Gladiolus enthusiasts who are artistically inclined. Several articles have appeared in THE MODERN GLADIOLUS GROWER touching on this subject. We refer especially to "Gladioli and Ferns," by W. M. McNeely in the April issue 1914. The flower shows have set some example along this line and prizes have been offered in several classes for artistic arrangement and display. May we not hear from those who have suggestions to offer which will be helpful in the proper display of the Gladiolus for the various decorative purposes?

It has already been pointed out that caution must be used in applying chemical fertilizers to Gladioli, or any other plant growth for that matter. An overdose has much the same result as an overdose of some medicines on the human system.

A Prophecy and a Plea for Gladiolus Popularity.

BY JOE COLEMAN.

Not that I am a seer, or a seventh son, or that the veil has been lifted, do I thus prophesy as to the future increased popularity of the Gladiolus. A sturdy young pioneer, THE MODERN GLADIOLUS GROWER is "blazing the trail," and is, without question, doing more than any other one influence to deliver the message telling of the glories of this wondrous flower. Pardon personalities, but Mr. Cooper yours is a grand work and deserves the hearty support of each and every grower in the country. Some days may seem dark, but the light of the future is just in the offing and unbounded success for your venture is so near at hand.

Last fall occasion took the writer to a few nearby towns, and time falling heavily, strolled about the resident portions to satisfy a certain curiosity as to how many gardens contained our favorites. Not a single bloom of *America* did I see, and the some half dozen little lots that were found were of such small flowers that they would have caused a spike of *Brenchleyensis* to blush with shame. I paused to figure. Supposing a single person of each one hundred population in this broad land would become a Gladiolus enthusiast and plant just a hundred bulbs it would take the gigantic number of 100,000,000 bulbs to supply the demand.

Why is our flower destined to such a wonderful growing popularity? What of the rose, beautiful but gone in a day? It's an old story, but nevertheless true, that the long keeping qualities of the Gladiolus bloom will cause it to come into its own if no other feature recommended it. What other flower has a wider range of form and color? Let us give credit to the dozen men who have spent years of toil in improving the foliage, the length of spike, the texture of the flower, the size and the shades of color. With the dawn of the variety, *America*, and on down the list of a hundred sorts, has the improvement gone on, and we have so far but a glimpse of what the future has in store.

Now, from a practical standpoint. Let all hands get busy and organize County Gladiolus societies. Endeavor to get at least ten people started. Once started a "crank" is quickly developed. Throw business care away and meet in friendly competition at your county or local fair. The Glad. Fever is a serious disease, and it is incurable, and it helps toward long life and prosperity.

WAYSIDE RAMBLINGS.

CONTROLLING FUNGOID GROWTHS ON GLADIOLUS CORMS.

TO THE EDITOR:—

I have read with interest the article on page 39 of the March number of THE MODERN GLADIOLUS GROWER by Mr. W. A. Christy. I note particularly his reference to the control of a disease of planting stock by treatment with formaldehyde solution. It does not seem possible that he can refer to the same disease that has been most studied at Cornell. Specimens of diseased stock that can be cleansed by the formaldehyde treatment would be appreciated from Mr. Christy or from others.

Now with regard to his opinion on killing a "fungoid growth" by killing the "generative buds," I feel certain that Mr. Christy is mistaken about this and I am sure Mr. Massey can demonstrate to any grower that the fungus causing hard rot can not be treated effectively in the way suggested. If any way can be found in which to finance the proposition, Mr. Massey will make an exhibit at the Newport meeting and have on hand specimens of diseased plants and living cultures of the organisms causing the diseases. In no other way can growers gain a clearer conception of the nature and causes of the diseases of the Gladiolus than by such an exhibit, under the personal direction of one who is intimately acquainted with the workings of a parasitic fungus. Obviously the understanding of the life history of the disease-causing organisms, which are annually demanding an increasing toll from the profits of the growers, can but lead to a more systematic fight against them.

DONALD REDDICK.

BULB OR CORM?

Some seem rather insistent that we should all say "corm" and "cormel" instead of "bulb" and "bulblet." To this it may be replied, "What difference does it make to us of the rank and file, so long as there's no danger of being misunderstood? We're used to 'bulb,' and it's easier for us to say that than 'corm,' even if the latter be the correct thing according to the botany. It doesn't make any real difference which is used, and we can use both. If those botany fellows want to say 'corm,' we'll make no objection; why can't they leave us in peace to say 'bulb'?"

But there's another way of looking at it. Even if to us "it doesn't make any

real difference which is used," to "those botany fellows" it may make a difference to the point of being painful for them to hear other than the exactly correct word. So if it makes no difference to us, and does make a difference to them, why can't we learn to say 'corm'? It won't hurt much after we get used to it, and will please them. I move that our Editor be requested to use only the terms that are scientifically correct in the columns of THE MODERN GLADIOLUS GROWER. And if any of us should write 'bulb' and he changes it to 'corm,' we'll promise not to get mad.

C. C. MILLER.

GOLDEN WEST AND PACHA.

TO THE EDITOR:—

I note in the May number of your valuable magazine that one of your correspondents claims that the Gladioli *Golden West* and *Pacha* are identical, the former variety being *Pacha* renamed.

I bought some bulbs of *Golden West* the first year it was offered by Henry A. Dreer, and liked it so well that I bought 50 bulbs the following year, intending to try to increase the stock, but I found that it was a very slow multiplier, and I sold all of my bulbs the next year to a Holland firm.

The same year that I bought the fifty *Golden West*, I purchased a quantity of *Pacha* from Vilmorin, of France, and when these two varieties came in bloom, I observed the similarity of their coloring, but *Golden West* was much superior in form of flower and spike, and the golden orange tone was brighter, the colors more beautifully placed, and the flowers of much firmer substance.

Judging from complaints that have come to me recently, it would seem that some of the Holland firms through ignorance or the other (obvious) reason, are selling *Pacha* under the name of *Golden West*.

L. MERTON GAGE.

"TREATING" CEDAR MARKING STAKES.

TO THE EDITOR:—

I notice your suggestion with reference to using cedar shingles for marking plantings of Gladioli and I have a suggestion which may be helpful. To make the cedar shingle markers last a number of years I sharpen the thick end instead of the thin end, painting the thick end for about eight inches with Creolin or Sulpho-Naphthol. The thin end I paint with a very thin white paint on which it is easy to write with lead pencil, although I use numbers put on with black paint. The

paint and Creolin preserve the markers almost indefinitely so that when once made there is little to do to keep them in usable condition for many years.

GEO. A. WHITNEY.

PERIOD OF REST.

Mr. Coleman can probably shorten that period of rest required by his bulbs. Experiments on various forms of dormant plant life normally requiring some months of rest have given immediate growth by treatment for a few hours with warm water, also by treatment with ether vapor.

By the warm-water method, the plants are immersed in water at 95° to 100°F. for a few hours. For the treatment with ether, the plants are placed in a tight box or can along with an open dish containing common sulphuric ether, and left for a few hours. Both methods should be tried out carefully with plants or bulbs of low value until results are definitely known. There is a risk in the use of both methods. Too long an exposure to ether will kill the plant or bulb, and too prolonged an immersion in warm water might also prove fatal. I believe five hours' exposure in ether vapor would be safe for *Gladiolus* cormels and well-ripened corms.

If either method should prove a success with the *Gladiolus*, it probably would make possible two seasons' growth in twelve months to a grower possessed of a greenhouse, perhaps two and a half, possibly three, by digging and ripening off a little prematurely, then treating and replanting. I think, though, that two periods in a year would be all that would be practical, even though more might be possible.

B. C. AUTEN.

CUTTING GLADIOLUS CORMS.

While there is, probably, some risk in cutting the corms of *Gladioli*, I think there are cases where it is advisable. We growers who buy for propagating purposes never buy large corms if we can help it, but sometimes we have them on hand and know that they will not produce any cormels to speak of. About the only way to get any increase will be to cut them. Last year I had a number of large corms of a named variety and, after treating them as usual, I made one cut from top to bottom as near the center as possible without cutting the central eye. These were planted late but nearly all pieces grew and made good corms. I am rather inclined to think that the new ones

so obtained will be more likely to make cormels (bulblets) than the old ones.

I had, also, a few scarce sorts and had pretty good success in getting cut bulbs of them to grow. If given a good place and planted early the new corms will be of good size. There is, of course, a little chance of decay on the cut side. It might be a good plan to dip the cut corms in soot. I did this but can not certainly say whether it made any difference.

GEO. S. WOODRUFF.

LICE ON GLADIOLUS CORMS—HUSK OF OLD CORMS COVERING NEW ONES.

TO THE EDITOR :

In the March issue of *THE MODERN GLADIOLUS GROWER*, page 35, Mr. C. L. Williams states that he has experienced trouble with lice on his *Gladiolus* corms. Several years ago I had the same trouble with corms purchased from a local seed house, and I found that by soaking the infected corms in a weak solution of kerosene emulsion that the lice were promptly killed.

On page 28 of the same issue I note that Mr. F. S. Morton states that the outside covering which is planted in the spring will cover the new corms which are dug in the fall. Is not this a misstatement of the fact? All *Gladiolus* corms that I have planted in the spring are found below the new corms developed during the season.

HOMER L. REINHARDT.

Note by the Editor:—Mr. Morton is correct in his statement, but it is also a fact that the new corm forms above the old one. While the new corm is forming the old one shrivels and this results in the husk of the old corm covering the new one. Many times, of course, the old husk decays during the growing season so that it is not found when digging the corms in the fall.

ARTISTRY IN STAGING GLADIOLI FOR DECORATIVE PURPOSES.

TO THE EDITOR :—

We are exhorted to use our best endeavors to use *Gladioli* for decorative purposes, but beyond being told that ferns go well with them, and that *Baron Hulot* makes a charming companion for *Niagara*, little or nothing has been said as to the how of using our beloved flowers in home, church, or elsewhere. Can we not have some definite and specific instruction as to "something different?"

M.

Gladioli from Seed in Florida.

BY THEODORE L. MEAD.

WE have a long season here and it is best to get the parent bulbs in the ground by the first week in February, usually blooming begins by the middle of April and seeds will be ripe in June. But bulbs may be safely planted till sometime in May. Our summers are too hot and wet for later planted bulbs, but the early planted ones seem not to mind the warm rains that destroy most kinds of garden vegetables during a Florida summer. Seeds of all kinds are apt to lose vitality if kept over summer here, and Gladiolus seed kept till the following spring shows small germination for the most part; the *Primulinus* crosses may show up with 20% of growth, but the average will be nearer five per cent and many fine crosses will be dead. But seeds planted as soon as ripe, preferably in flats, make good growth and nice bulbs, then some of them, if given greenhouse treatment, will keep green till planting time next year. When grown in flats they can be ripened off at any time desired by simply withholding water. Planted in open ground in July they need burlap covering and more or less tenting with muslin, and suffer much from moles—the moles do not eat them, but seem to have an insane desire to inspect and tunnel under every row in the seedbed.

I have only a few thousand bulbs and prefer to take the stamens from each and every flower bud as it expands. A small surgical dressing forceps (costs 40 cents) is a great convenience in handling the stamens. Tie the forceps to a string and hang the string around your neck while using it, or it will soon be lost or mislaid. Every morning I make the rounds, visiting every newly opened flower, pulling out the stamens and saving those whose pollen I may wish to use, each sort in a little envelop folded up from a piece of white paper 4 x 5 inches, labeled with the name of the variety and stowed in a tin box 4 x 4 x 5 inches, such as some brands of cigarettes are sold in.

If the flower is open enough to get the stamens, they are ripe enough to produce good pollen, though not yet open when taken from the flower. By the time all the flowers have been thus emasculated, I am ready to make the second round and cross selected flowers, each with such pollen as may seem best suited to carry out whatever plan of improvement may have been previously decided upon.

The actual pollination is greatly facilitated by a little shallow cup of cork—a large flat cork hollowed out perhaps the one-sixteenth of an inch and smoothly lined by gluing a bit of stiff paper in the hollow. The raised margin is just enough to keep the pollen from falling off or blowing away. This cork is supported by a copper wire pushed through it and curled about the last joint of the left forefinger so that when a stamen is laid in the cup the thumb may hold it by its filament or end and the pollen can be scraped out of each cell of the anther with the blunt point of one leg of the forceps, if it is too blunt, sharpen the forceps on the grindstone till it is about right. Then rub the stigma in this pollen until it is seen to be well covered with it, but really only one pollen grain is needed for each seed to be produced.

In this way, if care is taken, one stamen will abundantly fertilize three or four flowers, an important economy if the pollen is that of a rarity.

There being no pollen extant except that clinging to the stigmas, the humming birds and bees may do their worst without appreciably interfering with the work and no bagging is required. There seems to be no danger whatever of self-pollination. I have never known a case where a Gladiolus flower has set seed from pollen of the same variety, that is, a descendant from the same individual seedling. Probably the best test as to whether two varieties are identical or not is to cross-fertilize and bag them, if seed is produced they are distinct seedlings no matter how closely they may resemble each other.

Take *Europa* and *Rochester White* for example—*Europa* sets plenty of seed with *Rochester White* pollen and the reverse cross is difficult, the fact of seed production between the two assures their distinctness as individual seedlings.

Of course many kinds of flowers are self-fertile, and amid the millions of variations of seedling Gladioli an occasional individual might acquire more or less self-fertility, but it happens so rarely with the Gladiolus that we may disregard it in our practical work.

Seed from the North germinates readily here in the spring if not more than one year old. I bought a quantity of "blue *Lemoinei*" seed from Germany at a high

[Concluded on page 86.]

HINTS FOR THE BEGINNER.

BY FRANK S. MORTON

CULTIVATION—CUT WORMS—WATERING, &c.

The beginning of June will find most of the plants above ground although some of them may be even later than this. The Gladiolus grows in a way of its own and one should understand a little about how it unfolds in order to do the right things if trouble comes. The outside of the point which first appears above ground are the two outside leaves. The next set of leaves will come up through the centre and displace the first two, crowding them out into place, as it were, and so on until the full number of leaves have started. Then there will be a period of growth in which these leaves will broaden and lengthen and a thickening at the base which will indicate that the central bud stalk is forming. The bud comes out from the very centre and the complete plant shows a central strong stalk, surmounted by a flower spike and enfolding this stalk are the leaves.

Now, that the plants are above ground, cultivating should commence at once, either with a hand hoe, wheel hoe, or anything to keep the earth well stirred. Dig the earth up and loosen it about the plants so the air will get around them and the top layer of soil drying off quickly will keep the moisture underneath from evaporating and the plants will get the whole benefit. Now the knowledge of how the plant grows will be useful in this cultivating for if the hoe should strike a plant it will quite likely bruise the outside leaves at the bottom and later on they will turn brown and die. Therefore, be careful and keep at a distance with the cultivating tool. And if the plant begins to turn brown dig down and see if you haven't run against it. If so, the dead leaves should be removed.

Cut worms will doubtless appear at this time, and while various remedies are mentioned, the most effective is to either put paper collars around each plant or dig up the worm and kill him. If a sprout is found laying on the ground the cut worm will be found about half an inch or so under the surface and within two inches of the cut stalk. This holds good, however, only for the morning following the cutting off of the stalk as the next night the worm may have moved to some other place. Look for a greyish brown worm curled up in a circle and the chances are you will find him.

Cutting off the young plant does not

ruin it, as the method of growth as above described makes it possible for another set of leaves to push up into place and soon the damage will not be apparent. But too much of this or too repeated damage to the same plant will reduce its vitality to such an extent that care should be taken never to allow the cut worm to get at it but once. A little time each morning will rid a large space of the pests.

The trenches, if uncovered, may be filled in any time now as the plants have start enough to push up through most anything. If wood ashes are available strew some of them along before filling in. The potash in them will give brilliancy to the flowers and strength to the plants. No watering will be necessary if the bulbs were planted deep. But it will do no harm to allow water to run down between the rows occasionally, giving the plants a good soaking around the roots.

The main thing to be done this month is to keep the earth well stirred, especially after a rain. Breaking up the surface after a rain will cause it to dry quickly and keep the moisture underneath where the plant can utilize it. When the plants are well up, labels can be attached unless the markers separating kinds are enough. If named varieties are planted it is much satisfaction to be able to refer readily to the markers or tags to see what kinds are blossoming.

Gladiolus Society of Ohio.

The Executive Committee of the Gladiolus Society of Ohio authorizes the announcement that the next Annual Exhibition and Flower Show to be held by the Society, will be given in the Assembly Rooms of the Hollenden Hotel, Cleveland, Ohio, Aug. 13-14, 1915. An attractive Premium List is now in course of preparation, and a fine display is confidently expected.

WILBUR A. CHRISTY,

Secy. and Treas.

Suggestions for shipping cut flowers will be in order now and while past issues of THE MODERN GLADIOLUS GROWER have contained valuable ideas along this line, yet there is room for other and further suggestions. The shipping of cut Gladioli is a very important matter. A simple package is necessary and yet one which will protect the flowers against reasonably rough handling. Both Mrs. Austin and Joe Coleman have had articles on this subject and those who are interested would do well to look up volume one which contains same.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Old Bulbs Divide— Wild Species of Gladioli.

TO THE EDITOR:—

Last season I planted several hundred very large flat bulbs which gave rather poor bloom, and on digging in the fall most of them had developed two or three small bulbs, $\frac{3}{4}$ to 1 inch in diameter. Are these to be regarded as young bulbs, and will they do as well as bulbs of the same size grown from bulblets?

Is it possible to obtain bulbs of wild species of Gladioli other than *Primulinus*? If so will you please tell me from whom? W. A. G.

Answer:—In my opinion these bulbs were too old and worn out to even produce a bloom, and were, of course, unable to make a new bulb of any size. These small bulbs are not as good as young two year olds or as yearlings of same size. If "W. A. G." will take extra care to plant these small bulbs in a rich deep soil and give them special attention, he will get some fair blooms and bulbs which will respond to good treatment for several years.

Several English specialists have wild species of Gladioli which they use in experimental work. I have not their addresses, but I will get them and report as soon as possible.

RAYMOND W. SWETT.

Quantity of Fertilizer to Use on Gladioli.

TO THE EDITOR:—

The use of fertilizers, bone meal, ashes, etc., would seem to be a matter of no small importance in the cultivation of Gladioli, and we are warned that we must be careful not to overdo the matter, but to one who has never used a given fertilizer that warning is meaningless. How is the beginner to know whether an ounce or a pound is too much, say for a foot or a rod of Gladioli in a single row? Please let us have some exact figures. M.

Answer:—The criticism and suggestion is quite pertinent. Those who give directions for using fertilizer, for the most part, assume that the person who will use it is already familiar with the general use

of fertilizer, but this, of course, is quite erroneous in view of the fact that there are many new growers of Gladioli each year. The Editor is somewhat of a novice in floriculture, and makes no pretention to exact information, but he is quite willing to give his experience for what it is worth hoping that it will draw out other information along the same line.

Wood ashes has been our favorite fertilizer, perhaps from the fact that they have been easily available, as we are situated near a lime kiln that uses wood for lime burning. These ashes are doubtless fully one-third lime in addition to the regular proportion that wood ashes contain. It has been our practice to plough in the fall and apply fresh stable manure after ploughing. It is also good practice to plough again in the spring, but we have not always done this, and wood ashes may be applied after ploughing in the spring, but it has been more convenient for us to apply them before ploughing, although we are quite aware that this might not be the best practice. The quantity used we have never accurately measured, but it would not exceed equivalent to one-eighth inch in thickness over the surface of the ground and it would be less than this as applied each year rather than more. One-eighth inch would perhaps be equivalent to four or five pounds on a piece of ground ten feet square which would be equivalent to one ton to the acre. There is no objection to using at the rate of two or three tons to the acre if thoroughly mixed through the soil and if wood ashes had not been used before and if the land was in need of potash, phosphoric acid and lime. It is our idea that the wood lime is very useful to prevent the various rot and scab diseases caused by fungoid growth, and in using fresh manure as above no serious troubles have been encountered, although our soil is naturally rather lean sand. Most directions for applying manure state that it must be well rotted, but well rotted manure is seldom available and we have used fresh stable manure, mostly horse

manure, applied in the fall as above stated.

Those who have been growing Gladioli for some years become accustomed to applying fertilizer without any exact rule and they know approximately how much to use, and this is doubtless the reason why exact information is not available. Our experience in using wood ashes and in a small way other fertilizers as well, has been that it is always well to use these materials cautiously and never exceed the quantity recommended as it is liable to lead to disastrous results.

The experience of other growers would be very helpful along this line, and we hope to hear from those who can give exact or even approximate information.

MADISON COOPER.

American Gladiolus Society.

SHOW AT ATLANTIC CITY.

The American Gladiolus Society has decided to hold two exhibitions of Gladioli this year, one at Newport on August 18th and 19th, as announced, and an additional one at Atlantic City from August 26th to August 29th inclusive. The latter exhibition is intended for the benefit of the growers and dealers as Atlantic City in August presents the unusual opportunity of drawing up to 100,000 people a day to a show.

The Royal Palace Casino, situated directly on the boardwalk and surrounded by the ocean from three sides, has been secured and it will prove not only a daylight hall but the atmosphere for an



Gladiolus Field of D. W. C. Ruff, Buena Vista, Bald Eagle Lake, (near St. Paul) Minn.
Mrs. Ruff, with a bunch of "the beauties" in the foreground.

The Gladiolus Manual.

(Continued from page 72.)

Classes or groups such as *Gandavensis*, *Nanccianus*, *Lemoinei*, *Childsi*, etc., which are incorrectly spoken of at times as true species will be noticed in the following chapter.

(Continued next month.—Chapter III—"Introduction into Cultivation.")

Bound Volume No. 1 of THE MODERN GLADIOLUS GROWER costs but \$1.00 postage prepaid.

August day will be made delightful both to the flowers and the public.

Every possible assistance will be given by the committee in charge to those who live distances away, with information, guidance, accommodations for hotels, etc.

Exhibitors will be allowed to book all the business they can, in fact, the sole purpose of the exhibit is to boost the American Gladiolus for the American garden and thereby help the American grower to fight foreign competition, which has before this caused much concern to the American Grower.

Gladiolus Premiums Offered for 1915---Connecticut Fair Association.

THROUGH the efforts of James M. Adams, Chairman of the Publicity Committee of the Connecticut Horticultural Society, a big display of Gladiolus blooms is assured at Charter Oak Park, Hartford, Conn., Sept. 6th to 10th. Mr. Adams has secured premiums as per list which follows which will enable any Gladiolus grower, either amateur or professional, to compete. The prizes are liberal and should bring out a large entry. As will be noted the donors are among the largest and most popular Gladiolus growers and dealers. THE MODERN GLADIOLUS GROWER offers as an extra premium to those taking the first, second and third largest number of prizes, a life subscription, a five year subscription, and a three year subscription, respectively.

Mr. Adams has set a worthy example for other Gladiolus enthusiasts in the different states where premiums are offered for flower exhibits and with such an attractive prize list a big display should be secured.

OPEN TO AMATEURS ONLY.

E. E. STEWART, Brooklyn, Mich.

For best display named varieties of Gladioli, shown by an amateur 1st, 12 bulbs *Michigan*; 2nd, 12 bulbs *Black Beauty*.

H. E. MEADER, Dover, N. H.

For best 6 spikes of *Baron Hulot*—12 bulbs of *Jean Dulafoy*.

RALPH J. BRUCE, Longmeadow, Mass.

For best 12 spikes of *America*—25 bulbs of choice mixture.

HENRY YOEELL, Syracuse, N. Y.

For best vase of *Princeps*, 5 spikes—12 bulbs of *Contrast*; best vase of White, any variety, 5 spikes—12 bulbs *Pride of Goshen*; best vase of Yellow, any variety, 5 spikes—12 bulbs *Wild Rose*.

G. D. BLACK, Independence, Iowa.

For best 6 spikes of *Golden King*—1st prize, 12 bulbs of *Hiawatha*; 2nd prize, 12 bulbs of *Choccolate*; 3rd prize, 12 bulbs of *Mahogany*.

F. E. SWETT & SON, Stoughton, Mass.

For the best 6 spikes each of *Blue Jay*, *Europa*, *Panama*, *Niagara*, *War* (by an amateur)—1st prize, \$5 worth of bulbs; 2nd prize, \$3 worth of bulbs; 3rd prize, \$2 worth of bulbs, to be selected from catalogue.

L. MERTON GAGE, Natick, Mass.

(Open to amateurs only) For the best 3 spikes of *Mrs. Frank Pendleton* 1st prize, 12 bulbs of *Mrs. Frank Pendleton*; 2nd prize, 6 bulbs of *Mrs. Frank Pendleton*. For best display of 25 spikes, named or unnamed varieties—1st prize, 25 bulbs of Gage's Sunnyside mixture; 2nd prize, 25 bulbs of Gage's Hybrid seedling Gladioli.

A. N. PIERSON, Cromwell, Conn.

Best vase dark Pink, any variety—1st prize, 25 bulbs of *Pink Beauty*; 2nd prize, 25 spikes *Princeps*.

Best vase of Lilac, Lavender or Blue, 5 spikes in all, 25 bulbs of *Wild Rose*.

Best vase of any unnamed seedling variety, 5 spikes, 50 bulbs of *Brenchleyensis*.

A. H. AUSTIN CO., Wayland, Ohio.

For the best 6 spikes of *Summer Beauty*, 15 bulbs of the new variety, *Hereda*.

M. CRAWFORD CO., Cuyahoga Falls, Ohio.

For the best collection of unnamed seedlings—12 bulbs of the new White variety, *Theodosia Grant*.

W. W. WILMORE, JR., Wheatridge, Col.

For best 6 spikes of *Harwinton* and 6 spikes of *Dr. Goodwin*—1st prize, 24 bulbs of *Mrs. Frank Pendleton*; 2nd prize, 24 bulbs of *Master Weites*; 3rd prize, 24 bulbs of *Willy Wigman*.

STUMPP & WALTER CO., New York.

Silver cup for best collection, 10 named varieties, 3 spikes each.

J. A. EDMAN, 163 Pleasant Street, Orange, Mass.

For best vase of 12 spikes, any variety—25 bulbs of *Kunderdi Glory*. For best vase of six spikes, any variety—25 bulbs of *Halley*.

A. W. GARDINER, 14 Lyndale St., Springfield, Mass.

For best display *Mrs. Francis King*—12 bulbs of *America*; for best display of the new Gladioli *Forest City*—12 bulbs of *Niagara*; for the best display of *Mrs. Frank Pendleton* 12 bulbs of *Europa*.

BIDWELL & FOBES, Kinsman, Ohio.

For best vase of *Panama*—25 bulbs of *Panama*; for best vase of *Niagara*—25 bulbs of *Niagara*.

OPEN TO ALL.

M. F. WRIGHT, Fort Wayne, Ind.

For best display of *Rosebud*—12 bulbs of *Rosebud*, value \$5; for best display of *El Capitan*—one dozen *El Capitan*, value \$2.50; for best display of Red Canna, one dozen Red Canna, value \$1.

WILBUR A. CHRISTY, Warren, Ohio.

For best 12 spikes or more of *Rose Queen*, 50 bulbs *Rose Queen*; for best 12 spikes or more of *Orient*, 50 bulbs *Orient*; for best 12 spikes or more of *Mapleshade*, 50 bulbs of *Mapleshade*; for the best 12 spikes or more of *Ophir*, 50 bulbs of *Ophir*.

JOHN LEWIS CHILDS, Flowerfield, L. I., N. Y.

For the best selection of Gladioli in 6 varieties, 6 bulbs each of *Winsome*, *Charmers*, *Dazzler*, *Enchantress*.

W. E. KIRCHHOFF & CO., Pembroke, N. Y.

For best display of *Principine* (Kirchhoff's), 100 bulbs of *Glory of Holland*.

B. F. WHITE, Terryville, Conn.

For best new seedling, 100 bulbs of *King Philip*, value \$25; for the best new White variety, 5 spikes, one dozen *September*, value \$10.

JOE COLEMAN, Lexington, Ohio.

For best 12 spikes of *Golden King*, 100 bulbs of *Ruffled Glory*.

C. BETSCHER, Canal Dover, Ohio.

For best collection of 10 varieties, 6 spikes each, first prize, 100 bulbs *Primulinus Hybrids*; second prize, 50 bulbs of *Primulinus Hybrids*; third prize, 25 bulbs of *Primulinus Hybrids*; fourth prize, 13 bulbs of *Primulinus Hybrids*. For best collections of 5 varieties, 6 spikes each, to be different than the 10 varieties, first prize, 15 bulbs of *Primulinus Species*; second prize, 10 bulbs of *Primulinus Species*. For best display of Gladioli (effectiveness to govern), designs, baskets, table decorations, etc., first prize, 12 peonies, value \$12; second prize, 6 peonies, value \$6; third prize, 3 peonies, value \$3.

WILLIS E. FRYER, Mantorville, Minn.

For best 6 spikes of *Mrs. W. E. Fryer*, 12 bulbs of *Mrs. W. E. Fryer*; for best 12 spikes of *Kunderdi Glory*, 12 bulbs of *Mrs. W. E. Fryer*.

A. E. KUNDERD, Goshen, Ind.

For best display of *Kunderdi* type Gladioli—1st prize, 12 bulbs of *Mrs. Frank Pendleton*; second prize, 12 bulbs of *Summer Beauty*; third prize, 12 bulbs of *Kunderdi Glory*.

MUNSELL & HARVEY, Ashtabula, Ohio.

For the best vase of Red, 12 spikes—25 bulbs of the new Red Gladiolus *Hazel Harvey*.

W. A. BURPEE & Co., Philadelphia, Pa.

For best display of Gladioli from bulbs purchased from Burpee & Co.,—1st prize, \$3; 2nd prize, \$2.

JACOB THOMANN & SONS, Rochester, N.Y.

For best 6 spikes of any White variety—1st prize, \$5; 2nd prize, 25 bulbs of *Rochester White*.

WEBER & DON, Chambers St., New York.

For best display of *Primulinus Hybrids*, \$5.

THE MODERN GLADIOLUS GROWER, Cal- cium, N. Y.

To the winner of the largest number of prizes on Gladioli at the fair—1st prize, life subscription to THE MODERN GLADIOLUS GROWER; 2nd prize, 5 year subscription to THE MODERN GLADIOLUS GROWER; 3rd prize, 3 year subscription to THE MODERN GLADIOLUS GROWER.

VAUGHAN'S SEED STORE, 33 W. Randolph Street, Chicago, Ill.

For best display of *Mrs. Francis King*—1st prize, 12 bulbs of *Chicago White*; 2nd prize, 12 bulbs of *Margaret*.

The Fair Association offers cash prizes for best displays both in the Amateur and Professional Classes, but not in the Open Class to be competed for by both Amateurs and Professionals.

Copies of the Fair Schedule of Prizes in full will be sent on application to John L. Dower, President Connecticut Fair Association, Hartford, Conn.

An application of pulverized sheep manure or commercial fertilizer to garden flowers during the growing season should be accomplished by scattering these materials between the rows, raking them in rather deeply with a garden rake and thoroughly mixing them with the soil. Rains dissolve the chemical elements and carry them down to the roots of the growing plants. Consecutive applications of these fertilizing materials at intervals of two to four weeks is the best way of stimulating growth and making it uniform.

Gladioli from Seed in Florida.

[Continued from page 81.]

price. Its germination was excellent but only two per cent of the resultant bulbs produced blue or bluish flowers. *Praecox* received in the same invoice and planted in the same bed gave no sign of germination, it was undoubtedly superannuated. Next year *Praecox amaryllidiflorus*—several dollars' worth—germinated very well indeed, but gave no flower in the ten months' growing season. Next year it turned out to be a very ordinary *Lemoinei* strain. So it is better fun to grow your own seed and know that if the result is unsatisfactory, it's nobody's fault but your own.

Golden Measure which is being advertised by Wilbur A. Christy, Warren, Ohio, will doubtless be exhibited at flower shows this year, and people interested in a fine yellow should examine it carefully. Mr. Christy now has a pretty fair stock of this variety and will be able to supply it in moderate quantities another season.

CLASSIFIED ADVERTISING.

Growers having surplus stock for sale will find this department effective in disposing of it. Five lines (about forty words) \$1.00 per insertion. Additional lines 15c. each.

LAST CALL—25% off on all varieties Gladioli and Dahlias. Get our catalog. Send us any amount you wish and we will give you the most for your money you ever received, but act quickly. M. S. PERKINS, Danvers, Mass.

HYBRIDIZING to Order—I will undertake to grow hybridized Gladiolus seed to order from such varieties as are compatible. Write for my proposition. GEO. A. WHITNEY, 151 Winter St., Auburn, Me.

"WE are the originators of Princepine and grow the other choice varieties in quantity." Send list for quotations on planting stock or large bulbs. Wholesale only. W. E. KIRCHHOFF CO., Pembroke, N. Y.

THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.

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GLADIOLUS—*I. S. HENDRICKSON*.

(For description see page 98.)

The Gladiolus Manual.

BY W. W. WILMORE, JR.

CHAPTER III.

Introduction into Cultivation.

AFTER the introduction of the Collivillii species and its varieties in 1823 great interest was taken in this small-flowering class. Many crosses were made resulting in several good types. The Rev. W. Herbert crossed *G. cardinalis* x *G. blandis*, producing a beautiful race. Other crosses were made between *G. tristis*, *G. oppositiflorus*, *G. hirsutus*, *G. alatus* and *G. psittacinus*. Not until after the introduction of *Gandavensis* did the plant become universally popular.

Many good productions were either lost or forgotten when M. Beddinghaus, gardener to duc d'Arenberg of Enghien obtained a new hybrid with large flowers coming into bloom much later than those then in cultivation. This hybrid bears scarlet flowers with yellow markings on the lower petals. The stock of this hybrid was purchased by Louis Van Houtte, the celebrated Horticulturist of Ghent, Belgium, shortly after its introduction in 1837 and was put on the market in 1841 under the name of *Gandavensis*, (Glaieul de Gand—Gladiolus of Ghent). It was such a great improvement over the Gladioli of that day that the whole of Europe became enthusiastic over the progress which soon created a demand for this large flowering type.

Mr. Van Houtte gave us to understand that this hybrid was a seedling from the species *G. psittacinus* x *G. cardinalis*. However satisfactory this statement may have been to the public in general, it by no means settled the parentage. "The Hon. Rev. W. Herbert an acknowledged authority on bulbs, said that Mr. Van Houtte was in error because after repeated attempts to hybridize these species, he (Mr. Herbert) could not succeed. Consequently it was an impossibility and that Mr. Van Houtte must have been mistaken as to the origin of *Gandavensis*. All English authorities agree with Mr. Herbert. In every treatise on Gladioli his opinion was quoted as correct."—C. L. Allen.

We will all agree that climatic conditions alter the success attained in plant breeding. Also do we agree that some persons are more successful in the same project than others. While it may have been possible for M. Beddinghaus to cross

the two species mentioned in one climate, it was equally impossible for Mr. Herbert to accomplish the same feat in another and different climate. This, however, is only conjecture. The true parentage of *Gandavensis* will probably never be cleared up, but from varieties of this type which display strong characteristics of one other species we are lead to believe that *Gandavensis* really resulted from a cross between *G. psittacinus* x *G. oppositiflorus*. Attempts have been made with these two species to ascertain if possible the true origin. The resulting seedlings resemble closely the true *Gandavensis*.

Gandavensis, when crossed with other species and varieties, has given us some of the best of our garden varieties. It appears that nearly 3,000 distinct varieties of this type have been named at different times.

Mons. Souchet, gardener to the court of Napoleon III and an accomplished plant breeder, made many crosses with *Gandavensis*. It is said that he really laid the foundation of the modern *Gandavensis* type.

Gandavensis is characterized as follows: Stems very erect and fleshy, capable of absorbing water readily when cut, enabling the plant to open its buds freely. The flowers are set closely together on long stems, well opened and all facing the same direction. They are as a rule a little smaller than the ordinary garden varieties. Colors range from the most brilliant scarlets to the purest whites.

Brenchleyensis, 1848. Shortly after the introduction of the *Gandavensis*, Mr. Hooker of Brenchley introduced a scarlet variety which is still in commerce and which was for many years the best scarlet variety in existence. Mr. Hooker raised this seedling from seed of *Gandavensis*, giving it the name of *Brenchleyensis* in honor of his home.

Lemoine Hybrids, 1877-80. Victor Lemoine of Nancy, France, was next to create a sensation in the Gladiolus world. This achievement resulted from a cross between the best *Gandavensis* varieties x *G. purpurco-auratus*. The seedlings of this cross were very beautiful as compared with other Gladioli of that day. Their

rich colorings and velvety dark blotches won for them a place that will not soon be filled with any other type. At first few colors only were prominent in this strain but consistent and selective breeding soon added the missing colors and now the race comprises all the colors and is also arrayed by some of the richest in all the floral kingdom.

The hooded form of the parent species *purpureo-auratus* is still prominent in most of the varieties. The stems are thin and wiry which allows but few blooms to open at one time. This feature may be termed an asset or a draw-back. In one way the blooming season is lengthened. On the other hand, few flowers are open at one time. Another important feature is that the Lemoine hybrids are all producers of cormels (bulblets) which are as a rule larger than any other type. Flowers are produced on one side of the spike and are placed further apart than those of the *Gandavensis* type. In nearly all cases the flowers are heavily blotched. They were first noticed in 1877 and placed on the market in 1880.

Leichtlini or *Childsi*, 1882-94. Flowers of this race are large and well opened resembling closely the *Gandavensis* which is one of the parents. They are comparatively free from heavy markings and blotches, many opening at one time all of similar texture. The plant is tall and erect and especially adapted for cutting.

At the time Victor Lemoine was introducing his famous hybrids, *Max Leichtlin*, of Baden Baden, Germany was laying the foundation of a race which has since become extremely popular and one that has perhaps fixed the Gladiolus in universal favor for all time.

This cross was accomplished by the pollination of selected *Gandavensis* varieties with *G. Saundersi*, then a newly introduced species. The seedlings of this cross were perfected for a period of ten years when it was sold to V. H. Hallock & Sons, of Queens, N. Y., then the largest bulb growers in the United States. The transaction took place in 1882. The stock was again grown with new zeal for another term of ten years when it was purchased by John Lewis Childs, of Long Island, N.Y., who changed its name from *Leichtlini* to the name it now bears, *Childsi*.

The better *Childsi* varieties are considered the best in cultivation for general purposes, but we will also credit the best *Gandavensis* with being unsurpassed.

The first colors of this type were very rich running mostly to reds with spotted and variegated throats, but consistent breeding soon brought out the more deli-

cate colors, until we now have a race comprised of all the leading and blending colors which constitute our modern Gladiolus.

The *Childsi* race is one of the most popular and widely used of all Gladioli. It might be well said that few of the varieties of large flowering types of recent introduction are without this blood in their veins.

Nanceianus, 1889-95. Plants of this race are not as strong as the *Gandavensis*, *Lemoine* or *Childsi*. The plants often produce crooked stems, flowers seem to lack the proper substance under adverse conditions. They are, however, of varied and intense colorings, being well marked and blotched, resembling closely the *Lemoine Hybrids* in many cases.

This race originated with Victor Lemoine from crosses between the best hooded *Lemoine* varieties and the species *Saundersi*, with in all probabilities some of the best *Leichtlini* of that day. The coming of this race did not create as deep an interest as did the introduction of the *Lemoine* as many were weak and not particularly easy to grow.

The strain of *Nanceianus* derives its name in honor of Nancy, France, the home of Lemoine. Although most of the original varieties have disappeared, we still have the blood in some of our varieties of the present day.

The Blue Gladiolus. Shortly after the introduction of *Nanceianus*, Lemoine accomplished another cross of distinction between a selection of *Lemoine Hybrids* with *G. papilio* a purplish colored species, resulting in the race of blue Gladioli of which the well known variety *Baron J. Hulot* is a descendant.

It may be well said that Victor Lemoine has done more for the advancement of Gladioli than any other one man. The distinct characteristics so carefully bred into the *Lemoine Hybrids* have lasted through the years of cross breeding and will probably continue as long as they are used as parent plants.

After the introduction of the *Childsi* varieties, great interest was taken in the growing of Gladioli resulting in the introduction of various seedling types and hybrid strains, of which perhaps Mr. H. H. Groff of Simcoe, Canada, was most successful. If the truth were known, Mr. Groff and his co-partner, Mr. Arthur Cowee of Berlin, N. Y., have been instrumental in sending out at least one-half of the American Gladioli of to-day. Many varieties of merit were selected from Groff seedlings which may explain the reason that so many varieties identical

are found under different names. These seedlings were grown in quantities and sold to different persons in different parts of the country. As any stock of mixed varieties is comprised of many of one variety it is only natural to suppose that the same variety would fall into many hands when sold in mixture. Consequently each buyer upon finding a variety of merit in his purchase off Groff seedlings began to separate them from the mixed stock and to further find a suitable name for it. This also has given undue credit to the selector and has in several instances caused heated arguments between two or more selectors as to whom should go the credit.

Another American prominent in the Gladiolus world is Dr. W. Van Fleet who has given us the first of the Amaryllis-flowered or flat petaled type, *Princeps*. This production is from a cross between a *Childsi* variety, Mrs. H. Beecher and *G. cruentus*. Since the origination of *Princeps* many attempts with this large, flat petaled type have been made. Luther Burbank of Santa Rosa, Calif., has produced a similar type which he calls the *New Twentieth Century* type, consisting largely of red, salmon and pink shades. The flowers of this type measure six to eight inches when well grown, produced on long heavy stems with broad, heavy foliage.

Kunderdi, Ruffled. This interesting and novel strain of American Gladioli is the product of consistent and scientific breeding. The flowers of this type are beautifully waved and ruffled, resembling in texture the orchid-flowered sweet pea. The growth of this type of Gladioli is not unlike that of the ordinary garden varieties. The colors range from white to pink through shades of salmon and yellow, some bearing blotches on the lower petals and in the throat, while others are slightly penciled. Mr. A. E. Kunderd, of Goshen, Ind., has also introduced many other varieties of plain petaled form which are among the best of the day. As Mr. Kunderd had very little to work from in his accomplishment of ruffled Gladioli, he should be crowned with great credit. He has in the past few years crossed his ruffled varieties with *G. Primulinus*, a yellow flowering species of recent introduction. In these crosses he has obtained some very beautiful hybrids producing some of the richest shades of yellow, salmon and orange, also producing about 50% ruffled flowers.

Other men who deserve credit for the advancement of Gladioli are the Kelways of England, Brunelet and Vilmorin of

France, and Pfitzer of Germany. Other men are coming into prominence but if we were to mention them separately it would make a long chapter. However, most of the important growers and breeders will be mentioned under a list of "Prominent Varieties and Their Origin."

The poorer and weaker varieties are continually giving way to newer and better ones, and we may expect great changes for the better in the near future.

It will be remembered that many crosses have been made with Gladiolus species and varieties, but as those not here mentioned are of inferior quality or unimportance it will be useless to try to follow them. Therefore, we will bring to mind those only that play an important part in the Modern Gladiolus.

(Continued next month.—Chapter IV—"Development of Varieties.")



I. S. HENDRICKSON, MANAGER FOR JOHN LEWIS CHILDS.

(Showing the variety *I. S. Hendrickson* in Mr. Hendrickson's garden and giving a good idea of its height.)

"C. Y. H." in "Wayside Ramblings Department" this month has set a worthy example which we trust will be followed by other growers. Photographs with brief descriptive matter are always interesting and always very acceptable to the Editor.

MRS. AUSTIN'S TALKS FOR AMATEURS.

STUDYING THE FLOWERS—BEAUTIFUL
IRISES—THE SHIPPING CRATE.

We have been in the habit of visiting the flowers but they are coming to us this year. One of the two "young ladies" previously mentioned has been slightly afflicted in such a way that she is confined to her chair, and flowers now form a more important part in our lives than ever, but in a different manner. For many years we have been interested in the planting and caring for them, watching their growth day by day, the gradual progression into the bloom, and now when the flowers come and we have known nothing of their cultivation, they are full of surprises for us. Perhaps we are more observant than usual, anyway it seems that there are new delights in them. We find sometimes under the magnifying glass there are tiny flecks and lines and other markings, hardly perceptible, that we had not noticed before and that are visible only to the discerning eye of the true lover of them.

Jack says sister has yellow hair and blue eyes and most of the boys call her pretty, but sister's lover tells her that her hair is like burnished gold glinting in the sunlight, her eyes are wells of violet light, her lips twin cherries, while the rose and lily are rivals on her cheek. Jack's cold representation of his sister's bewitching beauty is much like some people's description of flowers, they notice only the most striking shades.

A friend sent us a box of Irises and a note of apology with them saying they were only flags, but the only flowers she had and she so deeply regretted being unable to send something really nice. Now what do you think they were? The first taken from the box was the Queen of May, so beautiful in its silken gown of soft rose lilac, and arranging it so that each bloom might exhibit its charms we carried it triumphant to its throne, long waiting for that particular shade to harmonize with the old rose tints of the room. Then came the stately Palida Speciosa, a wondrous thing with its daintily waved petals, and so sweetly refreshing in its cool lavender and purple loveliness. Both these varieties should be in every collection. We have enjoyed many other Irises, also the Pæonies, but are anticipating our greatest pleasure from the Gladiolus seedlings that we expect to bloom this season.

The hybridized seed was from our choicest varieties, the bed was carefully prepared, the seed planted, the rows one foot apart slightly ridged up and the whole covered with burlap and kept well cultivated. The soil was very sandy but good tillage retained the moisture. By-the-way, there are many weeders and cultivators in use, but for the small seed bed and in good sandy soil there is nothing that will turn so neat a little furrow or prove so useful for loosening the soil close to the tiny blade-like plants, as your own two thumbs, especially advisable when caring for very valuable varieties. Many of these seedlings bloomed last year from small corms and seemed desirable, but we have learned that these may be disappointing the second season and that varieties that were promising at their first blooming should be tried at least twice again before being discarded. One cannot be too critical or too searching for the unusual and desirable points of the seedling, for the seed bed contains the novelties of the future.

Get ready for marketing the blooms—no time when the rush is on. We still believe the shipping crate made from the orange box to be the most practical, especially for the average business haul. It is quickly made, is extremely low in price, and very light, thus reducing express charges. Of course, for long distance shipment a crate with water containers might be better.

We have received a number of inquiries recently regarding shipping crates and we can do no better than to refer to the July Number, Vol. I, of THE MODERN GLADIOLUS GROWER in which we gave a very accurate description and cut of our orange box crate, as well as a number of others. Those who have had limited experience in shipping cut flowers will find a reference to this number helpful. Select only the best spikes of desirable varieties, tie them in bunches of 27, thus allowing two for good measure and unexpected damage. Do this before placing them in water as they will not be so easily bruised, then after having given them a good drink, wrap each bunch with paper and pack snugly, standing them perpendicularly in the crate.

MRS. A. H. AUSTIN.

The article by G. D. Black on page 92 on the "Life History of the Gladiolus," contains some very interesting points and should be carefully studied by all growers. We believe that even experienced commercial growers will find some interesting things in this article.

Life History of the Gladiolus.

BY G. D. BLACK.

THE following inquiry has been submitted to me by the Editor and I am pleased to outline the life history of a Gladiolus corm as I have found it by many years of practical experience. The inquiry is as follows:

"To the Editor:—Do Gladiolus bulbs run out? I mean that after planting for several years, do they lose their vitality, and if so, just what happens?"

Perhaps this question can best be answered by the following quotation:

"To everything there is a season and a time to every purpose under the heaven; a time to be born and a time to die."

The general laws in vegetable life are the same as in animal life. One of these laws is that all things that are born must eventually die.

An original Gladiolus bulb is just as truly born as any of our domestic animals and the process is very similar. This knowledge which was not known until recent years, is enabling plant breeders to succeed in their work.

When the pollen from one variety comes in contact with the stigma of another it sends a tiny rootlet down through the pistil until it reaches the embryo seed. In this way two individualities are united and a new life is generated.

This new life or new variety embraces most of the general characteristics of the two parents in color, form, vigor and countless other characters, that makes each variety different from any other. Some characters may become more prominent, some may disappear and reappear after several generations. Some may be dropped entirely and some new characteristics may be developed by the environments of the parents.

If you carefully examine a Gladiolus seed with a magnifying glass you will see a miniature Gladiolus bulb that has been born and must die, even though it may increase by bulblets and division to millions as the famous variety *America* has done. A variety may remain vigorous for many years if propagated from bulblets under favorable conditions.

We have two separate stocks of *America* from different sources that show quite a difference in vigor, and there is a vast difference in the vigor of different varieties. I think those who have grown Gladioli for a long time, will agree with me in thinking that *May*, *Augusta*, and

some of the older varieties are less vigorous and harder to propagate than when these varieties were new.

It has been proven at the experimental stations that a variety of potatoes grown under good conditions for a number of years will not deteriorate so quickly as when grown under adverse conditions. The same rule will apply to Gladiolus bulbs. The life in a bulblet of *America* is not a new life but is a continuation of the life that was generated in the seed that produced the original bulb of *America*. The bulblets have about the same relation to the original bulb as the buds on an oak tree have to the acorn from which the tree grew.

Most varieties of Gladioli require about three years' growth from the bulblet before they reach maturity. For this reason two-year old bulbs are most valuable. Bulblets usually produce small bulbs that seldom bloom the first season. These bulbs nearly all bloom and produce a large number of bulblets the second year, but the blooms are not so large or numerous as they will be the following season, when they are usually at their best, or, we might say, in their prime of life. Some varieties will continue vigorous for only two or three years after maturity, and others for a longer length of time. Much also depends on the environment and the treatment that the bulb receives from the grower, so that no exact age can be set at which a bulb becomes worthless.

We have certain lots of bulbs that we have been planting in our test plots for about ten years, each spring planting the bulbs that grew on top of the old bulbs the previous season. Some that were old decrepit bulbs when we got them are all dead and gone. One lot has never produced a bulblet that we have seen, and but few flower spikes during the last six years, but it has increased from a dozen bulbs to about a hundred. What are they worth when they will not produce flowers? When a Gladiolus bulb dies, it usually fails to sprout and rots in the ground, but we sometimes find bulbs at digging time still sound that did not have vigor enough to sprout. As an experiment we have planted some of these the following season and they invariably rotted in the ground.

Some think they have ample proof that

[Concluded on page 102.]

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
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Vol. II.

July, 1915

No. 7

Gladiolus Diseases.

Professor Massey has offered some very sensible suggestions as given in our "Query and Answer Department" this month. We believe that there has been altogether too much talk about Gladiolus diseases during recent months. While there are Gladiolus diseases, and in places and at times they are very destructive, yet these cases are so exceptional that they need not be given too serious consideration by the average grower. Few growers indeed are able to grow corms without more or less affection by rots and scabs. As Prof. Massey so pertinently advises, it is not improbable that if affected bulbs are given good care that the trouble may be lessened or entirely eradicated. Those who have observed closely often note that diseased corms often give perfectly healthy increase whereas perfectly healthy corms often give badly diseased increase. The cause is the main thing to be determined and we offer as a suggestion that this is as often caused by careless and imperfect airing and drying at time of digging, as of any inherent disease in the corms.

It is certainly mystifying and somewhat disconcerting, not to say discouraging, to a new grower of Gladioli to hear so much talk about Gladiolus diseases and

the would-be Gladiolus enthusiast is likely to form erroneous impressions of what Gladiolus diseases really mean and to what extent they are likely to affect the growing of satisfactory bloom. Therefore, we hope that those experienced growers who write on this subject in future will take pains to explain just to what extent the disease is likely to be damaging and to explain the causes of same, if known, rather than elaborate on the various treatments which are not at all practicable for the small grower.

MADISON COOPER.

One of our friends in Florida sends us ripe Gladiolus seed from the 1915 crop. This has already been planted (June 7) in the hope of getting bulbs this fall which will bloom in 1916. This suggests that if the corms resulting from seed produced in Florida and planted and grown in the north are again planted in Florida in the fall, that it will hasten the time of blooming and improve the character of the offspring. Possibly this would be overworking the idea. The question of dormant period and the resting of the corms between planting, and possibly the resting of the seed from the time it is ripe and before it is planted, might come in to make the scheme inoperative.

The editor's first planting of *Pink Beauty* had long flower stems on June 26th and he expects to have bloom before July 1st. This is the earliest that bloom has ever been secured in this locality. It is wholly owing to the fact that when the *Pink Beauty* corms were planted they had sprouts three to four inches in length and, as someone suggested, they were practically "up" at the time they were planted. It is to be hoped that someone will suggest a practical method of starting Gladiolus corms before planting purposely to secure early bloom. Will not someone suggest the best condition under which to place the corms to cause them to sprout as desired?

Growing Gladioli from Bulblets.

BY FRANK S. MORTON.

Growing Gladiolus bulbs or corms from bulblets is a very simple matter if a few well known rules are observed. But when one has a great variety, the question of keeping small lots separate and especially where a valuable bulb gives only one or two bulblets, it is quite a problem. Planted by themselves in the garden, one or two tiny bulblets are liable to get lost in the shuffle. I have tried successfully the plan of starting these in the house in the early spring and transplanting to the garden after they are well up, in this way being able to keep track of them better. Last year I started them early in March. I took four inch paper flower pots and used potting earth well mixed with sand. The bulblets, after being carefully peeled, were planted in groups around the edge of the pots, which would allow sometimes eight or ten different varieties in one pot. I used care and got them separated, one lot from the other, by building a little fence of tooth-picks around each lot, marking the name or number opposite on the outside of the pot. I kept them well watered and in a room with less than the average amount of heat and they all germinated and grew finely, although some of them were a long time in starting. I transplanted them to a favored spot in the garden early in May. To do this I first wet the earth and then tore away the paper pot. I could then cut up the earth in sections, with a case knife, and transfer each lot of bulblets to their place in the garden, without disturbing the roots. At this time the

tops were from one inch to six inches high, although in some cases nothing showed above ground. But roots were found on all of them and as but very few of the small, fine ones had formed, there was no danger of disturbing them too much. Those accidentally loosened from the earth grew as well as any after being replaced.

This method will ensure the germination of a large proportion of the bulblets, which is desirable in cases where there are a few of a kind: will allow of their being planted out and tagged in a way which will prevent mixing, and what is of great value also, will give a crop of extra large bulbs. One bulb which sells for \$2.00 each gave me in 1913 four small bulblets and in 1914 produced no result, as its vitality was gone and it rotted in the ground. But by the above method the four bulblets gave me four good bulbs, one of which reached full blooming size in one season. Another equally valuable produced fifteen bulblets in 1913 and from these, in 1914, were grown five bulbs an inch and a quarter in diameter, and ten smaller ones and 170 bulblets. A hundred varieties may be started in a dozen pots, and a crop of good bulbs raised in a space 2x3 feet by thus transplanting. In the above case of 15 bulblets, the planting space in the pot was not over 1x2 inches. They were transferred bodily to the ground occupying the same space. They grew plants three feet high with strong stems and healthy leaves, and the product in bulbs and bulblets just filled a quarter pound bag. While the bulblets were close together in planting, they produced the above mentioned large bulbs, perfectly shaped and showing no evidence of crowding.

Remedies for Cut Worms.

If any of our readers have had experience with the various remedies for cut worms some of which are obtainable, some in liquid form and some in other forms, we would be glad to hear from them. The cut worm is a very serious pest at times and in certain places, and a reliable remedy would be a valuable thing to the Gladiolus grower. Any experience favorable or unfavorable which may be reported to us will be thankfully received.

To the end that preventive measures might be taken it would be interesting to have a brief life history of the cut worm so that we may know how he increases and from whence he comes. Can anyone give us this history?

WAYSIDE RAMBLINGS.

SOAKING CORMELS BEFORE PLANTING—
STORING CORMELS TO PREVENT
DRYING OUT.

In the April issue I read a subscriber's recommendation to soak bulbets in hot water. I soaked mine that way last year. When putting in the cellar in the fall I decided to experiment. The bulbets from a mixture I threw in a heap on the cellar floor with small quantity of dirt and covered with a box. This spring they are all plump and the hard shell is cracked on them, showing the white beneath in several places. I think that those bulbets will be apt to do finely. If they do, that is the way I shall do with bulbets hereafter.

MINNIE E. MAIN.

THE WALL VASE FOR
GLADIOLI.

TO THE EDITOR:—

This picture shows a bunch of luscious pink and white Gladioli in a pale green wall vase on the porch of our brown bungalow—the realization of my dream. As I was planting my first Gladiolus bulbs, May 6th, 1914, at Three Lakes, in Northern Wisconsin, I was advised not to "count my chickens before they were hatched," but this dream "came true." The first bloom was cut on July 24th and from that time until October 16th there was a continuous bouquet of these gorgeous flowers, giving us, as well as our friends, much pleasure.

C. Y. H.



Porch scene referred to by "C. Y. H."

markable intelligence, simply left the Gladiolus blossom until new ones opened. There will be no wild cucumber vines within a thousand feet of my beds this year.

J. H. SKINNER.

LICE ON GLADIOLUS CORMS.

A few years ago I bought some corms of a large grower that were infected with lice. I pulled off the scales and sprinkled them with sulphur and planted them deep, (six inches), they were a little late in starting as the vitality was somewhat sapped, but they produced good spikes of bloom and corms free from lice.

DAVID J. BAKER.

LICE ON GLADIOLUS CORMS—WILD CUCUMBER TO BE AVOIDED.

I noticed one of the readers of THE MODERN GLADIOLUS GROWER had trouble with lice on bulbs. A few years ago a few hundred of my bulbs were found suffering from pediculosis and I sprinkled flour of sulphur on them and the lice left at once never to return.

Last year I had some real trouble from another cause at blossoming time. As a cover to a fence I planted the wild cucumber. These vines were covered with cucumber bugs, not the ordinary striped little fellow of the vegetable garden, but a voracious demon-cousin which acquired a taste for Gladioli au-natural. The strange thing about this bug was that it ate only the yellow tints from the petals as the aster beetle eats one certain red Gladiolus. Spraying didn't seem to do any good, for the bugs, with their re-

WILD SPECIES OF GLADIOLI.

TO THE EDITOR:

In further answer of the query about obtaining wild varieties for breeding purposes I would say that V. Lemoine & Son, of Nancy, France, list in their catalogue Papilio major, Cooperi, Cooperi perfectus, Dracoccephalus, Leichtlinii and Lemoine type.

F. S. MORTON.

A SUGGESTION.

The amateur who enjoys growing Gladioli from seed and cares more for good looking varieties to show friends than for any particular method of production, is sometimes fortunate not to be bound by any particular theory but just *tries* to see what can be done regardless of science.

The ladies—may Heaven bless 'em—have courage enough to try something out of the ordinary. One has used pollen in part from a *Crinum* and the result was a beautiful light variety. Others have used lily pollen and are hoping for something entirely new and, of course, there will be still others.

The writer has repeatedly used the *Amaryllis* for crossing with Gladioli and the results were well worth while. It is not always easy to have *Amaryllis* and Gladioli bloom at the same time, but anyone not too easily discouraged can succeed. Never; the one who says, "I can't!"

F. M. HINE.

TEN BEST VARIETIES.

TO THE EDITOR:—

In my humble opinion the ten best Gladioli are: *America*, light pink; *Blue Jay*, blue, although not the ideal blue, this is the best blue to date; *Electra*, for scarlet; *Empress of India*, dark red; *Glory of Holland*, white; *Loveliness*, cream pink; *Mrs. F. Pendleton*, bright light pink; *Niagara*, yellow; *Panama*, dark pink, and *War*, deep clear blood red. While there may be larger flowering varieties taking these colors it would be hard to find a lot that all colors blend better or that are betters growers on the average. Besides that the price is not so high as to be out of reach of anyone.

RAYMOND W. SWETT.

WIREWORMS.

In Walter P. Wright's excellent English work on "Garden Flowers" he mentions the discouragement to growers of the Gladiolus that comes from the ravages of the wireworm. To quote Mr. Wright, "The grubs fasten on the corms in myriads, and soon make short work of a large collection." I have never read anything in your valuable little magazine as yet on the destructive habits of the wireworm in American Gladiolus gardens, and so judge it must be a calamity that has not as yet overtaken us. Perhaps our wireworms are of a different species from theirs, (Mr. Wright does not give the scientific name of his pest, and so we cannot tell) or perhaps the appetite of the English wireworm is different from that

of ours and a liking has been acquired for Gladioli that is analogous to the appetite of the Briton for mutton, plum pudding and tea, dietary units that are not overly popular in America.

Has THE MODERN GLADIOLUS GROWER any convicting evidence against the larva of the Click Beetle? H. G. R.

The Gladiolus in Romance.

The Gladiolus is growing in popularity—we all know that, but none of us was aware that it was already so popular that it could be used as the ground-work for a romance. In a recent issue of *The Ladies Home Journal* a real old-fashioned love story is woven around the beautiful flower to which our little publication is devoted. The story is called "The Gladiolus Man." It has its beginning when Miss Lucy Fifield, a New England spinster of thirty summers, sent her first order for corms to Austin Spencer a Gladiolus grower. This leads to an interchange of correspondence, and with the usual visit and subsequent acquaintance and with the inevitable result. The well known varieties *Dawn*, *War*, *Peace*, *Niagara* and *Blue Jay* are mentioned and Gladioli in general are lavishly and extravagantly praised at every opportunity. The whole story is a very cleverly written piece of fiction and aside from the fact that the author spells the plural of our favorite flower "Gladioluses" we commend the article for the perusal of those who are romantically inclined and especially to those who like the real old-fashioned love story. It is hardly probable that the placing of the first order for Gladioli will result for every spinster as it did for the Lucy Fifield of the romance, but possibly the story will induce larger purchases of Gladioli among the unmarried females "who have missed the mating time."

MADISON COOPER.

Gladiolus growers this year all complain of the unseasonable cold weather, and in the East the weather has not only been cold, but it has been dry and up to the second week in June very little rain had fallen in the months preceding. The month of June, however, has seen a reasonably heavy rainfall and good growing conditions are looked for from now on. In certain parts of the West growers complain of too much rain, but the cold weather has been general. A late start in the growing season means later bloom and with average seasonable weather it means that a late fall digging would be desirable.

The Iris.

By WILLIS E. FRYER.

There is a peculiar charm about the Irises that appeals irresistibly to those whose taste leads them to seek a close acquaintance with them. They fairly out rival the orchid in the wide range of coloring, which includes yellows from light canary to deep golden; blues from soft lavender to intense purples; reds, from pinkish mauve to claret and maroon; beautiful bronzes and pure whites, and some are marked and margined with other colors in exquisite harmony.

Culture.—A dry, sunny location suits them best. The most favorable time to plant is from the middle of August and through September, but they do well if

them all, but are not so reliable in the north as the German, Dwarf Bearded, Beardless and Siberian. They should be planted the last of August or the first of September. Late planting had better be deferred until spring, as, unless the plants are well protected by a covering of straw, they will be thrown out by the frost and lost. It is necessary to take them up, divide and transplant every two years, three at the most, or they will die.

I have tested over 550 varieties, and have given up getting any more distinct and valuable varieties by buying from others, and am now trying to get better varieties by raising seedlings myself. By the display of blooms I had last summer I believe I have many that are quite distinct and worthy of a name.



Japanese Iris on Mr. Fryer's Place at Mantorville, Minn.

planted in October and November, or in the spring. I have planted them ten months in the year with success. Plant them about as deep as they grew in the nursery. This can easily be told, for they will be white to the top of the ground. Avoid all fresh manure when planting, in fact, all manure where German Iris are planted. Even to mulch them with strawy manure during the winter may injure your plants. If you mulch them, and this will be beneficial to a newly set plant, use straw or leaves.

Irises are invaluable as cut flowers. If taken as the buds are about to open, and allowed to open indoors, the color will be much richer, and the flowers will last a long time, for as fast as one flower fades the next bud will take its place, until all have opened.

Japan Iris are the crowning glory of

American Gladiolus Society

NEWPORT SHOW.

A complete schedule of the American Gladiolus Society's Newport show is given in this issue. It is doubtless the most complete list of prizes that has been offered at a Gladiolus show anywhere and every one should compete in the class or classes in which they can make a good showing. Those growing on comparatively large scale can compete in several classes or more. Those interested in popularizing the Gladiolus should help make the show a success regardless of any desire to compete for prizes. Newport is a justly celebrated summer resort and those Gladiolus growers who have not visited this place will do well to make the trip, combining a visit to an interesting place with attendance at the Gladiolus show.

HINTS FOR THE BEGINNER.

BY FRANK S. MORTON

DEVELOPMENT OF THE FLOWER SPIKE—
ROT DAMAGE—RUST OF FOLIAGE—
FERTILIZING AND WATERING.

The beginning of July should see the plants well along towards maturity. The leaves should be fully grown and the base thickened to indicate that the flower stalk is beginning to form. Early in the month many of the early varieties will form spikes which can be felt pushing their way through the centre. By the middle of the month some of these will appear above the foliage and begin to lengthen out and develop buds. First comes the compact bud with overlying sections which show little of the final result. But as the spike pushes up above the plant these overlying sections separate until finally each one becomes a bud but still retaining the close cover of green. The real pleasure comes when some morning a bright spot of color appears at the end of the bottom bud and then progress is as a rule rapid. The petals swell and grow in size and depth of color until they break their bond of green and drop forward ready for the unfurling. When this condition exists at night it is pretty safe to expect the flower to be open the next morning although some varieties are very deliberate in this act. Each day thereafter a new flower appears whether the flower is picked or left on the plant.

The cut worm troubles will be over by this time and there are very few serious ones to contend with in healthy plants now. If the bulb was bad and had rot spots, these will have probably spread by this time and the plant will be beyond saving. This trouble is remote if good bulbs are planted. But if any plants turn yellow and appear to be dying, dig them up and get rid as far as possible of their contamination.

A trouble which may cause some worry is likely to appear now in the turning of the tips to a brown color. Sometimes a bed of plants will look as if all were dying but this trouble is not so serious as it looks. The trouble is unaccountable although some reasons have been given. Atmospheric conditions seem to be the most likely cause. If you have only a few plants and are particularly fussy, you can cut these brown tips off without damage. By the time they are brown again you will have the flowers and will forget all about the unsightly brown ends of the foliage.

To get bright colors and large flowers there must be thorough cultivation and top feeding in moderation. A mulch of any good dressing will aid. Sheep manure is good to use for a top dressing and gives excellent results. Don't overdo this work, however, and great care must be exercised not to get an excess of fertilizer around the plants. A good sprinkling with the hose will serve to keep the foliage looking clean and nice but a good soaking with lots of water around the roots is the best way to get water to the plants. An occasional thorough soaking will be good for the plants, as they respond to liberal treatment in this respect. But as has been previously stated, deep planting makes this less necessary.

The last of July should find many of the early planted varieties in blossom. If it is desirable to let them stay out of doors be sure and keep the wilted flowers picked off each day. Then the spike will open to the very tip. But if to be cut, leave as many of the leaves as possible—four at least—for the maturing of the bulb. Above all things, don't let the plants sprawl around and tip every which way, but keep them upright by stakes or trellises. Deep planting will make little of this necessary, but the way some beds are neglected after beginning to blossom spoils the whole effect. A little care each day will make a bed of flowers worth seeing and a credit to the grower.

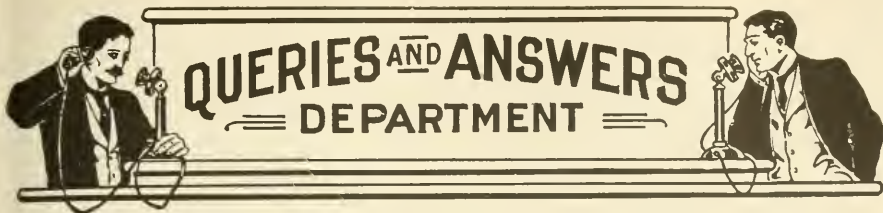
Gladiolus "I. S. Hendrickson."

(Subject of illustration on front cover.)

This is one of the well-known Childs varieties, originated by John Lewis Childs, Flowerfield, N. Y., and named by him after his manager, Mr. I. S. Hendrickson. It was first offered in 1903 and is described as follows:

Flowers extra large, carried on a large spike; color of a beautiful and irregular mottling of white and bright pink, in some the pink and in others the white predominating. When well grown it is one of the largest varieties. (See also garden picture on page 90.)

Constant tillage, especially after each rain, is desirable with any garden flower and the Gladiolus is no exception. A wheel hoe with rake attachment is just the thing to keep the ground stirred. Don't forget the suggestions which have been made from time to time about applying commercial fertilizer, wood ashes, pulverized sheep manure, etc., along the rows in small quantities. Stir this into the soil as deeply and carefully as possible.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Diseased Gladiolus Corms.

I am sending you under separate cover a few Gladiolus bulbs. Can you tell me what is the matter with them and whether they need any sort of treatment before being planted? What kind of treatment, if any, is needed? C. G. B.

Answer:—The three corms sent are affected with what is commonly known as scab. This trouble should not be confused with the rots, which are so commonly met with. To my knowledge, but little work has been done upon this disease and there is practically no available information.

Observations made upon this trouble lead me to believe that it does not greatly decrease the value of the corms. That the lesions on the corms do not increase during storage seems to be the opinion of growers. My observations confirm this opinion. No corms so affected, to my knowledge, have ever failed to germinate and produce healthy plants, although of course it is conceivable that a corm could be so badly affected that such would be the case.

Studies made here, in the laboratory at Cornell University, have thrown little light upon the cause of this abnormal condition. Attempts to connect the disease with some fungus or bacterial parasite have so far failed. One grower of Gladioli found an unusually large amount of this disease among corms grown in soil which was low and damp, and suggested the possibility of the poor condition of the soil being the cause of the trouble. Another suggestion is that the disease is due to the work of wireworms. At present this latter suggestion seems to me to be the one most plausible. It is my plan to start some experiments in the near future which will determine this point.

It is obvious from the foregoing statements that no treatment previous to planting the corms seems advisable. My advice is to plant the corms in light, well drained soil in which Gladioli have never been grown. It might be considered advisable, in view of the limited knowledge of this disease, to segregate the corms so

affected to preclude any possibility of the disease being transmitted to sound corms. If the plants are given the best of care during the summer and at harvesting time, it is not improbable that the trouble will be lessened.—L. M. MASSEY in *The Florists' Review*.

Diseased Gladiolus Bulbs.

I grow quite a quantity of Gladioli—have probably 20,000 bulbs or more, and some are infected with a kind of rust showing as dark brown spots on the corm, sometimes so extensive as to kill the plant and in many cases greatly to weaken it. It has occurred to me that treatment with formalin might be a remedy for this trouble. Can you tell me whether formalin has been used for such a case? If so, with what results, and what dilution to use and when? I would think the proper way would be to moisten roots just before planting in the dilute solution. Also what is the best dilution for treating seed oats for prevention of smut?

J. M. L.

Answer:—Gladiolus corms during growth and storage, are attacked by three different diseases, hard rot, soft rot and scab. At present no cure is known for the rots, which are controlled by discarding affected bulbs and planting in fresh soil, free from animal manure. Scab is controlled, or greatly reduced, by soaking the corms for 20 minutes in formalin, one pint to thirty gallons of water, or for the same time in bichloride of mercury, fifteen grains to one gallon of water. For oats we use one pint of formalin to 60 gallons of water.—*Rural New Yorker*.

We would very much like to get good clear photographs of any of the well known varieties of Gladioli whether long introduced or not. We would particularly like a good photograph of the old favorite *Brenchleyensis* or any of the varieties which we have not already illustrated will be very thankfully received.

Secure bound Vol. 1, while it is still available. For reference it will prove valuable. Price \$1.00 postpaid.

American Gladiolus Society.

Schedule of Prizes of the Sixth Annual Exhibition of the American Gladiolus Society to be held under the Auspices of the Newport Garden Association and the Newport Horticultural Society at the Casino, Newport, R. I., August 18th and 19th, 1915.

Copies of the Schedule may be had by addressing
H. YUELL, Secy., 538 Cedar St., Syracuse, N. Y.

THE Exhibition Committee of the American Gladiolus Society takes pleasure in presenting the Schedule of Prizes to be awarded at the Show to be held August 18th and 19th, at Newport, R. I., and earnestly trusts that all growers, amateur and professional alike, who can will take part, thus making the Show the largest and best ever held and creating a greater interest in our beautiful flower.

RULES.

No. 1. All entries must be made to the Secretary not later than five days before the first day of the exhibition, on blanks provided by the Secretary for the purpose.

No. 2. Exhibits in competition for prizes must be of the exhibitor's raising.

No. 3. All exhibits must be in place by 12 o'clock noon the first day of the Show, at which time the judging will commence.

No. 4. Exhibitors are required to keep their flowers in fresh condition during the time the exhibition remains open.

No. 5. Exhibitors will be awarded but one premium in each class in which they compete and then only where the exhibits on their merits warrant the judges in making awards.

No. 6. While the Society will take reasonable care of the property of exhibitors, yet it will not in any way be responsible for the loss of or damage to anything exhibited.

No. 7. Exhibits after being staged cannot be removed until the exhibition is closed, without the consent of the Exhibition Committee.

No. 8. The Society requests exhibitors to attach labels to exhibits. Correct naming of varieties is very important.

No. 9. Vases and tables will be provided for all competitors.

No. 10. Seedlings to be passed upon by the judges must be entered on the blanks, stating the number of vases.

NOTICE.

Those who cannot attend the Show with their flowers are cordially invited to send them by Express prepaid, with entry cards attached, and they will be properly staged. Due notice should be given to the Secretary.

A cordial invitation is extended to commercial growers to make trade exhibits; every facility will be afforded them.

Manager of the exhibition:—H. YUELL, 538 Cedar Street, Syracuse, N. Y.

Assistant:—ALEX. MACLELLAN, Horticulturist, Newport, R. I.

SCHEDULE OF PRIZES.

OPEN CLASS.

GLADIOLUS BLOOMS.

T. A. HAVEMEYER, New York.

	1st	2nd	
No. 1—	\$6.00	\$4.00—	Best 6 spikes any White Variety.
No. 2—	6.00	4.00—	Best 6 spikes any Pink or shades of Pink.
No. 3—	6.00	4.00—	Best 6 spikes any Yellow.
No. 4—	6.00	4.00—	Best 6 spikes Blue or Lavender.
No. 5—	6.00	4.00—	Best 6 spikes Red or shades of Red.
No. 6—	6.00	4.00—	Best six spikes any other color.

W. ATLEE BURPEE & Co., Philadelphia, Pa.

No. 7—\$10.00—Best collection 10 varieties 6 spikes of each.

JACOB THOMANN & SONS, Rochester, N. Y.

No. 8—\$5.00—Best vase of White or light seedling, new.

W. W. WILMORE, Jr., Wheatridge, Colo.

No. 9—\$5.00—Best 6 spikes *Golden West*.

CLARK W. BROWN, Ashland, Mass.

No. 10—\$5.00—Best 3 spikes *Mongolian*.

No. 11—5.00—Best 3 spikes *A. W. Clifford*.

A. H. AUSTIN & Co., Wayland, Ohio.

No. 12—\$5.00—Best 6 spikes *White Bertrex*.

H. W. KOERNER, Station B, R. F. D. 6,
Milwaukee, Wis.

- No. 13—\$5.00—Best 12 spikes *American Wonder*.
No. 14—5.00—Best 12 spikes *Twilight*.
No. 15—5.00—Best 6 spikes *Blue King*.

E. E. STEWART, Brooklyn, Mich.

- | | | |
|---------------|-----------------------|------------------------|
| 1st | 2nd | |
| No. 16—\$3.00 | \$2.00—Best 12 spikes | <i>Black Beauty</i> . |
| No. 17—3.00 | 2.00—Best 12 spikes | <i>Lucille</i> . |
| No. 18—3.00 | 2.00—Best 12 spikes | <i>Minneapolis</i> . |
| No. 19—3.00 | 2.00—Best 12 spikes | <i>Sulphur Queen</i> . |
| No. 20—3.00 | 2.00—Best 12 spikes | <i>Michigan</i> . |

H. A. DREER, Chestnut St., Philadelphia, Pa.

- No. 21—\$5.00 first; \$2.50 second—Best vase, 5 spikes each *Heliotrop* and *Sulphur King*.

C. BETSCHER, Canal Dover, Ohio.

- No. 22—Best display Primulinus blooms, not less than 4 inches across. Not less than 25 spikes. 1st prize \$6.00. Second prize \$4.00.

CARTER'S TESTED SEEDS, Chamber of Commerce Bldg., Boston, Mass.

- No. 23—Best 12 spikes any variety in one vase. 1st prize \$5.00. Second prize \$3.00. Third prize \$2.00.

A. E. KUNDERD, Goshen, Ind.

- No. 24—Best collection Kunderd varieties, both plain and ruffled petals. First prize Gold Medal. Second prize Silver Medal. Third prize Bronze Medal.

H. F. MICHELL & Co., 518 Market St., Philadelphia, Pa.

- No. 25—Best 25 spikes *Hollandia*. First prize Silver Medal. Second prize Bronze Medal.

L. MERTON GAGE, Natick, Mass.

- No. 26—25 bulbs *Mrs. Pendleton* for 6 best spikes of that variety. Second prize 20 bulbs. Third prize 15 bulbs.

PERKINS-KING CO., West Mentor, Ohio.

- No. 27—100 bulbs *Panama* for best 20 spikes *Panama*.
No. 28—100 bulbs *Niagara* for best 20 spikes *Niagara*.

CHARLES F. FAIRBANKS, Boston, Mass.

- No. 29—\$15.00—first; \$7.50, second; \$2.50, third—For best seedling never before exhibited. Not less than three spikes.

THE GARDEN ASSOCIATION, Newport.

- | | | |
|----------------|--|--|
| 1st | 2nd | |
| No. 30—\$20.00 | \$10.00—Best 25 spikes any White variety. | |
| No. 31—20.00 | 10.00—Best 25 spikes Red or shades of Red variety. | |
| No. 32—20.00 | 10.00—Best 25 spikes Yellow variety. | |
| No. 33—20.00 | 10.00—Best 25 spikes Pink or shades of Pink variety. | |
| No. 34—20.00 | 10.00—Best 25 spikes Blue or shades of Blue variety. | |
| No. 35—20.00 | 10.00—Best 25 spikes any other color variety. | |

HITCHINGS & Co., Elizabeth, N. J.

- No. 36—Silver Cup, value \$10.00—For the most artistically arranged basket or hamper of blooms not more than 25 spikes.

FIRMA P. VOS, Mz., Sassenheim, Holland.

- No. 37—First \$6.00; second \$4.00—Best 3 spikes *Clear Eye*.

RAYMOND W. SWETT, Saxonville, Mass.

- No. 38—Bulbs valued at \$5.00, first; Bulbs valued at \$3.00, second; Bulbs valued at \$2.00, third—For best 10 spikes each *Blue Jay*, *Europa*, *Panama*, *Niagara* and *War*.
No. 39—(Open.)

AMATEUR AND PRIVATE GARDENER CLASS.

STUMPP & WALTER CO., Barclay St., New York.

- No. 40—Silver Cup—Best 10 varieties, 3 spikes each.

H. E. MEADER, Dover, N. H.

- No. 41—Cut Glass Vase—Best 3 spikes of seedlings raised by exhibitor.

JOHN LEWIS CHILDS, Flowerfield, N. Y.

- No. 42—Best 3 spikes each of *Charmer*, *Dazzler*, *Enchantress*, *Winsome* and *Wild Rose*. First prize \$5.00. Second prize \$3.00. Third prize \$2.00.

H. A. DREER, Chestnut St., Philadelphia, Pa.

- No. 43—Best 5 spikes each *Europa* and *Panama*. First prize \$5.00. Second prize \$2.50.

JACOB THOMANN & SONS, Rochester, N. Y.

- No. 44—\$5.00—Best 6 spikes any White variety.

CHAMBERLAIN & Co., Wellesley, Mass.

- No. 45—\$5.00—Best vase Pink seedling, 5 spikes.
No. 46—\$5.00—Best vase Yellow seedling, 5 spikes.

ARTHUR COWEE, Berlin, N. Y.

- No. 47—\$5.00—Best vase Blue variety never before exhibited before the A. G. S.
No. 48—\$5.00—Best vase not less than 10 spikes of *Peace*.
No. 49—\$10.00—Best vase not less than 6 spikes of *War*.
No. 50—\$5.00—Best vase not less than 6 spikes of *Dawn*. (Groff.)

W. W. WILMORE, Jr., Wheatridge, Colo.

- No. 51—\$5.00—Best 3 spikes *Golden West*.
No. 52—Best collection, 2 spikes each. First prize \$10.00. Second prize bulbs valued at \$10.00.

L. MERTON GAGE, Natick, Mass.

- No. 53—Best 6 named varieties, 3 spikes each. First prize, bulbs valued at \$5.00. Second prize, bulbs valued at \$3.00. Third prize, bulbs valued at \$2.00.

G. S. WOODRUFF, Independence, Iowa.

- No. 54—Best 25 spikes *Minnesota*. First prize, bulbs valued at \$5.00. Second prize, bulbs valued at \$2.50.

A. E. KUNDERD, Goshen, Ind.

- No. 55—Best collection new Ruffled Types. First prize, Gold Medal. Second prize, Silver Medal. Third prize, Bronze Medal.

H. W. KOERNER, Station B, R. F. D. 6, Milwaukee, Wis.

- No. 56—\$5.00—Best 12 spikes *American Wonder*.
No. 57—\$5.00—Best 12 spikes *Twilight Chief*.
No. 58—\$5.00—Best 6 spikes *Blue King*.

G. D. BLACK, Independence, Iowa.

- No. 59—Best 25 spikes *Golden King*. 25 bulbs *Blue Bird*, 25 bulbs *Hiawatha*.

VAUGHAN'S SEED STORE, Chicago and New York.

- No. 60—Silver Medal—Best 36 spikes from the following varieties: *Hyde Park, Chicago White, Margaret, Mrs. F. King and Princeps*. 12 spikes of each of the selected varieties.
No. 61—\$3.00—For best 12 of any one of the above varieties. Open to private gardeners of Newport and vicinity only.

BIDWELL & FOBES, Kinsman, Ohio.

- No. 62—Silver Medal—Best 10 spikes *Panama*.
No. 63—Silver Medal—Best 10 spikes *Niagara*.

C. BETSCHER, Canal Dover, Ohio.

- No. 64—Best 25 spikes *Primulinus* types, blooms not less than 4 inches, cut from 4 ft. stem. First prize, 5 New *Hemerocallis*, value \$7.50. Second prize, 3 New *Hemerocallis*, value \$4.50. Third prize, 2 New *Hemerocallis*, value \$3.00.
No. 65—Best 25 spikes hybrids or seedling blooms from plants not less than 4 ft. tall. First prize, 5 new *Paeonies*, value \$7.50. Second prize, 3 new *Paeonies*, value \$4.50. Third prize, 2 new *Paeonies*, value \$3.00.

J. M. THORBURN & Co., Barclay St., N. Y.

- No. 66—Best exhibit of *Primulinus Hybrids*. First Prize \$6.00. Second Prize \$4.00.

B. HAMMOND TRACY, Wenham, Mass.

- No. 67—Silver Cup. (To be designated.)

CHARLES F. FAIRBANKS, Boston, Mass.

- No. 68—Best collection and display. First prize \$3.00. Second prize \$2.00.

AMERICAN GLADIOLUS SOCIETY.

- No. 69—Best exhibit of at least 15 varieties, 3 spikes each, correctly named. First prize, Silver Medal. Second prize, Bronze Medal.

THE MODERN GLADIOLUS GROWER, Cal-cium, N.Y.

- No. 70—For the best display of Gladiolus blooms not more than 36 spikes. No preference given to named varieties. First prize, Silver Trophy Cup valued at \$15.00. Second prize, A Life Subscription to THE MODERN GLADIOLUS GROWER. Third Prize, A Five Year Sub-scription to THE MODERN GLADIOLUS GROWER.

H. YUELL, Syracuse, N.Y.

- No. 71—\$3.00, first; \$2.00, second; \$1.00, third—For best 3 spikes any named variety.

MUNSELL & HARVEY, Ashtabula, Ohio.

- No. 72—25 Bulbs *Hazel Harvey*—For best 10 spikes any Red variety.

W. E. FRYER, Mantorville, Minn.

- No. 73—20 Bulbs *Mrs. W. E. Fryer*, First; 15 Bulbs *Mrs. W. E. Fryer*, second—For 6 best spikes of that variety.

RAYMOND W. SWETT, Saxonville, Mass.

- No. 74—Bulbs valued at \$5.00, first; Bulbs valued at \$3.00, second; Bulbs valued at \$2.00, third—For best 6 spikes each *Blue Jay, Europa, Pan-ama, Niagara and War*.

Special prizes offered by the Newport Horticultural Society for competition among growers, Florists, Gardeners and Amateurs residing within the state of Rhode Island.

To be shown in conjunction with the

American Gladiolus Society's Annual Ex-hibition at the Casino, Newport, R. I.

OPEN CLASS.

- | | | | | |
|-------|---------|--------|--------|---|
| Class | 1st | 2nd | 3rd | |
| A | \$12.00 | \$8.00 | \$4.00 | —Best collection 6 varieties 12 spikes to a vase. |
| B | 5.00 | 3.00 | 2.00 | —Best vase of Gladioli artis-tically arranged, suitable for the decoration of drawing room or parlor. |
| C | 6.00 | 4.00 | | —Best basket or hamper artis-tically arranged. |
| D | 5.00 | 3.00 | | —Best center piece of Gladioli. |

AMATEUR CLASS.

- | | | | | |
|-------|--------|--------|--------|-----------------------------|
| Class | 1st | 2nd | 3rd | |
| E | \$3.00 | \$2.00 | \$1.00 | —Best 6 spikes White named. |
| F | " | " | " | " " " Dark Red " |
| G | " | " | " | " " " Light Red " |
| H | " | " | " | " " " Deep Pink " |
| I | " | " | " | " " " Light Pink " |
| J | " | " | " | " " " Violet or Blue named. |
| K | " | " | " | " " " Yellow " |
| L | " | " | " | " " " Any other color " |

distinct from above.

JOHN SCHEPERS & Co., INC., New York.

- M—Silver Cup—Best collection of Gladioli by a private gardener.

Payment of these prizes will be made through the Treasurer of the Newport Horticultural Society.

Life History of the Gladiolus.

[Continued from page 92.]

Gladioli will change color because they miss some varieties after growing them a few years. The fact is that some of the varieties lacking vigor die and rot in the ground while the more vigorous ones will increase by division so that the dead ones are not missed.

A bulb five or six years old will produce but few bulblets. As an illustration, I quote from one of my previous writings on this subject: "A Gladiolus bulb will reproduce itself and bulblets freely for a few years but the production of bulblets and the vigor of the old bulb will gradu-ally diminish same as the production of eggs by the old hen. The bulb may bloom and the old hen may show her gaudy feathers for a few years longer but they are both nearing the end of the journey from which no traveler returns."

"THE AMERICAN BOTANIST"

Is published for all who are interested in the curious facts about our native wildflowers.

\$1.00 A YEAR. SAMPLE FREE.

Willard N. Clute & Co., Joliet, Ill.

THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.

Published Monthly by Madison Cooper, Calcium, New York.

Vol. 11.

AUGUST, 1915

No. 8



GLADIOLUS—*INTENSITY*.
(For description see page 114.)

The Gladiolus Manual.

BY W. W. WILMORE, JR.

CHAPTER IV.

Development of Varieties.

FOR a long time after the introduction of the early Gladioli into our gardens they were regarded as plants of only ordinary usefulness, filling space and giving variety to the surroundings. The first varieties ran mostly to reds and shades of red, flowers being very small and somewhat stiff in appearance. They were particularly easy to grow and often left in the ground over winter, showing up again in the spring if protection had been provided. This ease of culture put them in a state of disregard which perhaps accounts for the long period in which they were grown before being bred scientifically or enough interest aroused in them to cause the growers of this plant to work out the beautiful present day varieties. After the more scientific breeders took hold of the plant and demonstrated to the flower loving public the hidden treasures in the plant, it was but a short time until many were working with an enthusiasm which has lasted to the present time. Their success brought with it newer and better varieties also causing others to take up the work which has resulted in the naming of thousands of varieties.

The first crosses were as an experiment rather than with an object in view, and I call the attention of the reader to the fact that the first crosses were simple hybrids resulting from two or more distinct species. These hybrids were crossed resulting in different varieties, some of which it is only natural to suppose were absolutely worthless, others on a level with the parents, while a very small percentage were better than any of previous birth. Selective and consistent breeding has eliminated the inferior qualities and has strengthened the better qualities, so much so that it is now a rare case when a seedling from any variety of standard type falls to the level of the first crosses.

Another feature which made the first crosses difficult was that in breeding two or more species, it was first necessary to select those that bloomed at the same time in order that the pollen from one could be placed on the stigma of the other which in turn vitalizes the dormant seed causing productivity. In many cases this feat was extremely hard to accom-

plish, especially as it was a new project with the early breeders. It has been necessary in some cases to grow one parent under glass in order to bloom the flower at a time when the other parent was in flower in the open.

It has come to the point where so many different varieties of different origin are interwoven by cross-breeding that it is now impossible for the expert to say just what blood has entered into a certain variety. For this reason one can readily see why such great doubt stands in the way of the parentage of some of our best types and varieties. Little does this matter, however. We are not breeding to gain a pedigree for our favorite variety but to obtain a better variety than that now existing. Could we but gain this point from a cabbage we would have reached our mark.

One point in which we are somewhat egotistical is the fact that we are proud of ourselves when we have introduced a new variety of merit. In this case we have merely put two and two together, our success is wholly dependent upon the pioneer who first started the blood running through the veins of its ancestor. Without the success of the pioneer breeders our work could be nothing. It might here be remarked that amateurs in the Gladiolus game have been instrumental in originating some of the best varieties of their day.

Some of our greatest productions have come from chance seedlings, while on the other hand equally fine varieties are from scientific pollenization. Another particularly peculiar fact is that some very good varieties are the progeny of inferior parents, while some of our best varieties produce the most inferior seedlings. We can account for these variations by noticing Nature's law of production in all her lines of animal and plant life which are governed alike. The more inferior the life the more productive, the more advanced life the less productive, at the center we have a steady sameness. This law can best be illustrated by citing the human race. Take the lower classes—they are overly productive. From this class comes the lowest types of humanity. Note the

other extreme, we have absolutely no record of any great mind ever reproducing its likeness. In fact, few are the descendants of the great. Study the central type of mankind, it is from this source that come the units which rule in all lines. So it is with plant life. The further from the central point we go for our parent, the weaker and less productive becomes the progeny; the further below we reach the more productive and inferior becomes the progeny; the nearer the center we stay the greater will be our success and the greater will be the plant race on which we work.

There are to my knowledge several Gladiolus specialists who have been breeding Gladioli for years and have not accomplished a single variety of merit. These men I would term comet chasers; that is, they are breeding at such a great distance from the center that the progeny of their work always becomes a failure and leaves them at the same point at which they start. On the other hand, I have known amateurs who were content to breed from ordinary varieties and have in some cases produced wonderful effects.

As a summary, choose a parent of moderate normal habits, strong in texture, graceful in form, breed from this class and success is unbounded.

(Continued next month.—Chapter V—"The Scientific Structure of the Plant.")

Securing Early Bloom.

By JOE COLEMAN.

Should it not be a prime essential to get all the beauty possible, all the profit possible from a long blooming period, and the Gladiolus is one of the very few species that will allow the hand of man to mould its destiny and cause it to bloom almost at will? My attention has been directed to the editor's statement of having *Pink Beauty* in bloom by July 1st, also his invitation for suggestions as to methods that would insure earlier flowering.

It has been a particular hobby of the writer to have Gladiolus bloom as nearly all the year around as possible and success in so having them about eight months of the year brings one to realize what may be done from both the amateur and professional standpoint. Commercially to have field blooms one month to six weeks earlier than by the usual method of taking the corms from storage and planting, means shining dollars of profit when prices are high. For the north, it is understood, the early bloom is forced under greenhouse glass or shipped in from the south, the former means quite a long growing

period and the latter high express charges, both these methods are expensive and the June weddings using Gladioli for decorations have to pay the price.

After its period of rest heat and moisture will cause a corm to sprout. To my mind dirt bands purchased at a cost of \$1.00 per 1000, are a boon to growers who desire early flowers. By dirt bands are meant paper pots without bottoms. Heretofore have used 4 in. bands, putting one first size bulb in a band. Next season will try 5 in. bands, placing three first size bulbs in each. Believe it will work equally as well and thus instead of sixteen square inches being used for each bulb only a fraction over eight would be required. Adopting the 5 in. band the bulbs would be transplanted to the field in groups of three and not separated or disturbed in the least. It has been proven to my own satisfaction that one cannot be too careful and the bulbs should be lifted and transplanted in a manner that cannot check their growth in the least. As soon as danger from severe frost is over, band, plant and dirt may be set out thus not disturbing the roots in the least.

The fancier whose requirements are a limited number of flowers for home-use, may start the corms in bands either in a furnace room or window in February. The ordinary seed flat 16 x 16 x 4" will hold sixteen corms and be found desirable.

For large plantings either a greenhouse, cold-frame or hot-bed will be necessary. The out-lay is not great to equip a mild hot-bed and it will serve equally as well as a greenhouse. To have Gladiolus plants six inches high when transplanted to the field in April, means abundant flowers during June. One spike in June is worth six in August. Oh, what a difference!

Frank S. Morton, Portland, Maine under date of June 28th reports that he had his first Gladiolus bloom on that date. It was one of the wild species, *Leichtlini*. At the same time he reports that his *Pink Beauty* are beginning to show buds. We would be glad to have reports on early flowering from others, in the north especially, as California and the Pacific Northwest, Florida and throughout the south have, of course, had bloom for some time.

The backwardness of the early growing season may make it difficult for those who did not plant unusually early to have sufficient bloom for the August shows this year. This in the same way will help those who want to show at the fairs in September.

Artistic Effects in Floriculture.

By C. KEUR & SONS.

THINGS out of the ordinary, although artistic, seem to have the call, and especially in the laying out of gardens, according to the correspondence we have received so much of late from all over the country. We felt nothing would give better results than to have matters discussed by this much read paper, (THE MODERN GLADIOLUS GROWER) hoping many will take part in giving their opinion as to how to beautify the landscape, which will certainly be realized if all do a part on their own grounds.

We, as bulb growers, would ask: "Have you ever seen a Blue Garden?" It is the latest floral curiosity. Buy bulbs throwing blue flowers now, make your garden, yard or room beautiful and be happy. Let this article help you in realizing your ideal of beauty, comfort in or around your residence. Blue is the color of Mystery. In the universe there are systems which we call blue and in which are concealed many mysteries, viz: "the blue deep" or ocean, and "the blue sky", containing so many things wonderful. It is likely for this reason that Maeterlinck, the celebrated Belgian dramatist, uses blue constantly in his fascinating stage settings, and it is said to be owing to Maeterlinck's influence that the blue garden has become the loveliest corner of many a famous European or American country-seat and estate. A garden made up entirely of blue flowers with a light colored or white residence in the center or in the background produces a very beautiful effect.

The blue garden itself need not remain a hobby of the rich only, as the outlay for the bulbs, plants, tools, etc., is not large, but it takes some exact knowledge of bulbs, roots and plants which will produce blossoms of real blue color. A list of such we will give below. Those who wish to lay out a blue garden should buy a supply of bulbs, roots and plants early and get them set out at the right time so that a good root growth will be made before flower stems begin to shoot up. When freezing weather comes on protect the planted area with a covering of straw or leaves. Hyacinths and Gladioli must be entirely protected from frost, while other bulbs or roots only want a little protection preventing frost and wind from taking a direct hold of the ground. When the bulbs throw up shoots of about two inches the covering should be removed, or before if heavy freezing weather is past.

Lovers of flowers, as we all ought to be, but not in possession of a garden or backyard, may buy a small quantity of bulbs and roots to be grown in the house for winter flowering, in order to give the conservatory or the dining room a cheerful aspect.

Buy good sized bulbs. As a rule the larger the bulbs the better, as they give more or stronger flowers. The bulbs must be heavy for their size; solid and well ripened off, and to secure first quality send your order in early.

Bulbs in general are sensitive to standing water, so put one or two inches of sand under each bulb for drainage if your ground is not sandy. Do not plant in straight rows nor too wide apart, lest you lose the best effect of the flowers.

Hyacinths—The fragrance of a bed or a window full would delight the soul even of an oriental. There is a wide range of these exquisite blossoming bulbs in navy, sky, porcelain, indigo, light and dark blue, and violet in both single and double varieties, viz: *Grand Lilas*, *Grand Maitre*, *Johann*, *King of the Blues*, *Queen of the Blues*, *Regulus*, *Schotel*, *Blocksberg*, *Chas. Dickens*, *Lord Reglan*, *Othello*. Plant Hyacinths about three to four inches deep and four to five inches apart.

Tulips in single and double early and late in the blue and violet shades can be ordered the best in early single as *Couleur Cardinal*, *La Remarquable*, *Moliere*, *Potter*, *President Lincoln*, *Van der Neer*, and *Wouwerman*. In double *Lac van Haarlem*, *Blanc Bordé*, *Pourpre Cousine*, *Blue Flag* and *Rhinoceros*. In the Darwin or single late flowering tulips we can mostly recommend in the blue shades *Dream*, *Faust*, *Kate Greenaway*, *Louis Langlart*, *Mrs. Potter-Palmer*, *Nora Ware*, *Nymph*, *Rev. Ewbank*, *Violet Queen* and *William Copeland*.

Crocus come next in varieties like *Albion*, *Baron van Brunow*, *Maximiliaan*, *Purpurea Grandiflora*, etc., and do not forget the *Muscari* botryodes blue (*Grape Hyacinths*), *Scilla Siberica*, *Campanulata cærulea*, *Chionodoxa*, *Babiana Purpurea*, *Camassia Esculenta*, *Erythronium Dens-canis*, *Iris Anglica*, *Hispanica*, *Germanica* and *Kämpferi* in varieties like *Bleu Mourant*, *King of the Blues*, *Prince of Wales*, *Alexander van Humboldt*, *Darling*, *Formosa*, *Australis*, *Neglecta*, *Royal King*, *Violet Queen*, *Uncle Tom*, *Atlantis*, *Kleber*,

[Concluded on page 117.]

MRS. AUSTIN'S TALKS FOR AMATEURS.

BIRDS WILL BE BIRDS—REQUIREMENTS FOR GOOD NEW GLADIOLI.

There's a robin's nest in the grapevine and it was built so near the pantry window that we became intimately associated with the builders, and unavoidably overheard many plans and discussions that were probably not intended for our ears. They seemed much pleased with their location and congratulated themselves on their choice many times because of its being near the Oxheart cherry tree. The building of the nest required much skilled labor and it was plain to be seen that Mrs. Robin was the architect, but they both worked hard early and late until it was completed.

After the eggs were deposited and Mrs. Robin began sitting, Mr. Robin, aside from providing meals, became much taken up with community interests. He learned that there were several families of Blue Jays in the fir trees, and that the young Yellow Hammers in the hollow trunk of a nearby elm would soon begin taking first lessons in flying. And there was that conceited old Redheaded Woodpecker pompously drumming the bark on the oxheart tree in that aggravating way of his and keeping one eye on the fast ripening fruit.

Robin also noticed with great interest that a young tree of a new variety of cherry was heavily laden with its first crop, and although the fruit looked quite green he was much surprised at the fine flavor. Being accustomed to the black cherries, he could hardly believe a white one would be so delicious. What grand eating they would be when fully ripe. Looking the tree over carefully he found a large luscious one, creamy white blushed pink, which he quickly carried to Mrs. Robin expecting her to be especially pleased and surprised, but she made no comment. "My dear," he began, "I hope you noticed the wonderful size and delicious flavor of that cherry. It came from that young tree at the corner of the milk house. You know we have so enjoyed the shade and rustling foliage of that tree, but I never dreamt it would bear such excellent fruit. Now, Mrs. Robin, I have a plan that I think will interest you. You know that all we birds have preferred the black oxheart cherries instead of the sour, red ones, and the cherry man plainly noticing our preference gave the fruit of that tree to us but picked the red ones

for himself. It is my opinion that if all the birds in the neighborhood would show a decided preference for the new white cherries that the cherry man would give them to us, and in my mind they are much superior to the black, which are so leathery. My idea is to call a meeting of the greatest cherry eaters, Robins, Blue Jays, Yellow Hammers, Redheads, also the Catbirds, if they care to come, and decide this question. What do you think about it?" But Mrs. Robin from her dream world only murmured absently: "Were you speaking of cherries," and Robin sulkily tucked his head beneath his wing.

Early the next morning he shrilly called the birds to the old oak from whose top they could overlook both the black and the white cherries. The subject was discussed pro and con and many were the arguments. Blue Jay preferred the black cherries because the tree was larger and there were more of them, but here Redhead pointed out that the tree was very old, that he had found the bark full of insects, that the heart was nothing but punk, and the whole tree liable to blow over any time, while the young tree was strong and thrifty and would probably grow to large size and bear much fruit. They were apparently about to decide in favor of the white cherries when Catbird became frightened at the sudden appearance of a large crow (who could restrain his curiosity no longer) and gave a number of frightful meows which broke up the meeting.

Although there were no more meetings, Robin and his followers carried themselves as if the matter had been decided in favor of the white cherries and swooped down on Blue Jay and his clan whenever they appeared in the forbidden black cherry tree. And the controversy grew. When the cherries were dead ripe, the cherry man, who loved birds, came out on the porch and, lighting his pipe, sat down to enjoy a smoke and watch the happy (?) birds. Blue Jay, quickly observant, slyly called his family and started for his favorite tree, but before they could alight, the air seemed full of birds charging in blind fury. The cherry man gazing in astonishment forgot to smoke, but gasped: "What is the matter with them, they act like humans. Those birds need a diet of worms. The cherries shall be picked," and he straightway sent boys into the trees with pails, and as the cherries began to disappear, the birds realizing their terrible loss, forgot their enmity and joined their forces in one great effort to save the cherries either black or white.

The young Robins were hatched, page

Mother Robin, neglected and hungry, having heard faint rumors of cherry trouble, flew to the tree where, with flashing eyes and in a voice choking with anger, berated them all soundly, ending with the sobbing cry, "Now we have no cherries for our young."

The cherry man said: "Curious, but birds will be birds, I suppose."

The nest is vacant now and the cherry man is caring for his Gladioli, for he is planning to make exhibits at the various shows. He wants other growers to see the good old standards as he grows them, also the new varieties that he has grown from seed. He knows that there are many new varieties, but his must be good new varieties, and in growing his stock he has the question: What constitutes a *good new variety*, constantly in his mind.

The bloom must be attractive enough to at once attract the eye of the casual observer, preferably wide open, of good substance, a clear self color or strikingly marked. Many in bloom at one time and facing together. The spike should be long and straight, though an occasional crooked one may be used to good advantage if gracefully arranged. He considers the tall and slender, but straight, whip-like spike an improvement over the stiff heavy spike.

The general effect should also be considered. It may be especially desirable for landscape massing, vase use, or for floral designs, all of which are valuable points. As there are many good varieties that possess most of these points, in choosing new ones it is well to watch for those that show some distinctive trait, a difference of form, or perhaps an unusual combination of colors that will make them distinct from others.

The large blooms have been eagerly sought and are indeed very beautiful and decorative but there is a place for the tiny one. Varieties of miniature size, but open bloom, well placed, and in the beautiful shades of the large flowering kinds would prove desirable, and we are sure to find them in time in the *Primulinus* hybrids.

MRS. A. H. AUSTIN.

We expected in reply to the article by Mr. Swett in last month's issue to hear more fully from growers with their ideas on the ten best varieties. Certainly there must be a chance for a big difference of opinion. Next month we will criticise Mr. Swett's ten varieties and offer some suggestions as to why the ideas of people vary on this subject.

Harmony or Discord in a Vase of Gladioli.

BY H. G. READING.

A vase of Gladioli can be a thing of exquisite beauty or it can be an offense to the critical eye, depending on the selection of colors or the arrangement of the flower spikes. Hard and fast rules cannot be laid down that might enable a novice to secure as good results in bouquet building as an expert, since ability along that line is dependent in a great measure on artistic feeling, which must be inherent, but the temperament can be acquired, either by practice or by the study of good pictures.

It should always be borne in mind that the key-note of artistic composition is simplicity, and so generally, a higher attainment of beauty is possible when a bouquet is made from a single color or variety of flower, but the shades of color in Gladioli are so varied and pleasing that the possibilities of securing harmonious combinations by the use of mixed varieties is great. While the tall, straight flower-spikes might suggest a too monotonous stiffness for artistic arrangement, they can often be relieved and contrasted by those which are gracefully curved or bent.

The beauty of a bunch of Gladioli is enhanced by the use of a suitable vase or marred by an unsuitable one. Above all it should not be fancy in design or highly decorated. The flowers themselves being gaudy, they demand a rather plain receptacle. The ideal vase for Gladioli is smallest in diameter at the center and widest at the bottom, or it may have plain perpendicular sides, but never should it be narrowest at the bottom. It should be ample enough to allow the spikes to spread gracefully and avoid over-crowding, one of the principal faults that so often prevent a pleasing arrangement. A tall, plain wide-bottomed glass pitcher makes an excellent container for a liberal sized bouquet.

To get the best general effect it is important that the background and surroundings be harmonious, as this flower fits best in the peaceful atmosphere of a room having rather plain walls and simple furnishings, and would certainly be at war in a room having a gaudily decorated wall as a background.

A well arranged vase of Gladioli is suitable for almost any place, purpose or occasion, and for porch decoration, where the light is somewhat stronger than in the house, it is especially desirable and most charmingly effective.

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Special favors to none, and a square deal to all.

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Vol. II.

August, 1915

No. 8

Do Varieties Run Out?

It is possible that there may be two sides to the matter of Gladiolus varieties running out. A Gladiolus corm is to all intents and purposes a branch of the original corm. This being the case, it is difficult to see how it is possible for a corm to deteriorate. An analogous case is that of the strawberry, in which the runners are certain to produce plants like the first one. Now a runner is only another kind of branch. We might arrange a series of such branches, beginning with the slender runner of the strawberry, then the thicker offsets of the century plant, the stalked bulblets of the fairy lily, the bulblets enclosed in the scales of common lilies and the cormels of Gladioli. A variety may slowly change with variations of climate, soil and the like, but it does not seem possible that it can run out. Consider the case of the Concord grape, the Greening apple, the Bartlett pear and the like. These plants are multiplied by budding, grafting, or cuttings, never by seed. All the Concord grapes in the world are parts of a single plant discovered by Ephriam Bull. These varieties have not run out. Possibly the Gladiolus will, but it is difficult to see how it can if it is constantly reproduced

by cormels instead of seeds. Of course, if seeds are used, any form may be changed very quickly. In the interests of plant students in general, it would be well if further data could be had as to exactly how the Gladiolus runs out.

WILLARD N. CLUTE.

The variety, *Intensity*, which is illustrated on our front cover page, has been grown by the Editor for some years. It came to us in a mixture which was secured, we think, from Arthur T. Boddington, the well known seedman. *Intensity* is such a strong grower and good increaser that it became prominent in the mixture and forced itself on our attention.

The description on page 114 says that the lower three petals are spotted with white with a deep scarlet vein in the center. We called this blotch a "silver marking," as it conveys that impression. The foliage is of rather spreading to drooping habit and exceptionally ornamental. *Intensity* is worthy of a trial by those who have not grown it.

MADISON COOPER.

Don't forget that we always need good photographs of the better known varieties. Those having such photographs will confer a great favor by allowing us to use them for publication.

* Premium List of the Third Annual Flower Show to be held by the Gladiolus Society of Ohio, August 13 and 14, 1915 at the Assembly Room of The Hollenden Hotel, Cleveland, Ohio.

AMATEUR DEPARTMENT.

- Class 1
By The American Gladiolus Society.
Best Display, 10 or more varieties, 6 spikes,
each, Silver Medal.
Second Display, 10 or more varieties, 6 spikes
each, Bronze Medal.
- Class 2.
By The H. J. Alford Co.
Best Display, 10 or more varieties 6 spikes,
each, cash, \$5.00.
- Class 3.
By Bidwell & Fobes.
Best vase any yellow variety, 10 spikes,
Bronze Medal.
- Class 4.
By Bidwell & Fobes.
Best vase any Pink variety, 10 spikes,
Bronze Medal.
- Class 5.
By Henry Youell.
Best 6 spikes, any Named variety, cash, \$3.00.
Second—best 6 spikes, any Named variety,
cash, \$2.00.
Third—best 6 spikes, any Named variety,
cash, \$1.00.

PROFESSIONAL OR OPEN DEPARTMENT.

FREE FOR ALL.

- Class 6.
By Charles F. Fairbanks.
Best Display of Seedlings never before exhibit-
ed, three or more varieties, three or more
spikes each, cash, \$15.00.
Second—three or more varieties, three or more
spikes each, cash, \$7.50.
Third—three or more varieties, three or more
spikes each, cash, \$2.50.
- Class 7.
By "The Modern Gladiolus Grower."
Best Display, ten varieties, 6 or more spikes
each, Silver Cup.
Second best Display, ten varieties 6 or more
spikes each, 5 yr. sub.
Third best Display, ten varieties 6 or more
spikes each, 3 yr. sub.
- Class 8.
By W. Atlee Burpee & Co.
Best vase any Red variety, 10 spikes, cash, \$5.00.
- Class 9.
By The A. H. Austin Co.
Best vase Light Red variety, 10 spikes,
25 corms Austin Seedling "Gretchen Zang."
Class 10.
- By Matthew Crawford.
Best vase New Red variety, 6 spikes, cash, \$5.00.
- Class 11.
By N. L. Crawford.
Best vase any White variety, 10 spikes,
cash, \$5.00.
- Class 12.
By Jacob Thomann & Sons.
Best vase any White variety, 10 spikes,
50 corms Rochester White.
Second vase any White variety, 10 spikes,
25 corms Rochester White.
- Class 13.
By G. B. Babcock.
Best vase pure White variety, 10 spikes,
Peony "Karl Rosenfeld," val. \$10.00.
- Class 14.
By Munsell & Harvey.
Best vase New Yellow, 6 spikes, cash, \$5.00

- Class 15.
By Joe Coleman.
Best vase any Blue variety, 10 spikes,
cash, \$2.00.
- Class 16.
By The A. H. Austin Co.
Best New Yellow Seedling, without blotch,
cash, \$5.00.
- Class 17.
By The Perkins-King Co.
Best vase Panama, 12 spikes, 100 corms Panama,
Class 18.
- By G. B. Babcock.
Best vase of any one variety, size of spike and
bloom only to be considered.
5 New Peonies, val. \$10.00.
- Class 19.
By G. B. Babcock.
Best New Seedling, any color, 6 spikes,
New Seedling Peony *Midnight*.
- Class 20.
By C. Betscher.
Best vase *Europa*, 10 spikes,
12 Named Peonies, val. \$5.00.
- Class 21.
By C. Betscher.
Best vase *America*, 10 spikes,
12 Named Peonies, val. \$5.00.
- Class 22.
By C. Betscher.
Best vase *Mrs. Francis King*, 10 spikes,
12 Named Peonies, val. \$5.00.
- Class 23.
By C. Betscher.
Best vase *Scribe*, 10 spikes,
12 Hemerocallis, val. \$2.50.
- Class 24.
By C. Betscher.
Best vase *Mrs. Frank Pendleton*, 10 spikes,
12 Hemerocallis, val. \$2.50.
- Class 25.
By C. Betscher.
Best Display Seedlings, 100 spikes, 1 or more
each, 12 Hemerocallis, val. \$2.50.
- Class 26.
By W. W. Wilmore.
Display winning largest number variety*Pre-
miums, Stock from catalogue, val. \$7.50
- Class 27.
By W. W. Wilmore.
Best arranged Display,
Stock from catalogue, val. \$5.00.
Second best arranged Display,
Stock from catalogue, val. \$2.50.
- Class 28.
By R. E. Huntington.
Best collection of Red varieties, Silver Cup.
- Class 29.
By The Cleveland Flower Show Committee.
Best new variety never before shown here, 12
spikes, Silver Cup, val. \$25.00.
- Class 30.
By The Ohio Horticultural Society.
Best Display by any one exhibitor,
Bronze and Silver Cup, val. \$25.00.
- Class 31.
By Wilbur A. Christy, Mapleshade Gladiolus Farm
Best New White Seedling, 6 spikes,
1 corm *Golden Measure*, val. \$10.00.
- Class 32.
By the Society.
New Seedling, or other variety, never before
shown here, any color, grown by exhibitor,
6 spikes, (see Rule in regard to this class),
Certificate of Merit.

*This list was received too late to publish the rules and regulations, but a copy of same may be had together with entry blank by applying to Wilbur A. Christy, Sec'y., Warren, Ohio.

WAYSIDE RAMBLINGS.

A GLADIOLUS-LILY CROSS.

"All signs fail in dry weather" and there seem to be exceptions to some interesting theories. When an experiment gives an unexpected result it may also be interesting.

Evidence that Gladiolus seed may be influenced by using lily pollen—the small bulblet, similar in appearance to those often seen growing on lily bulbs, which occasionally forms on the Gladiolus corms not planted until late, can readily be seen in the photograph herewith. I have never seen anything like it on any Gladiolus where lily pollen was not used.

In experimenting with amaryllis pollen alone, Gladiolus *Baltimore*, with flowers tied in a paper bag gave a few insignificant seedlings which were discarded. When Gladiolus pollen was used, followed by that of an amaryllis, the same variety



Corm of Mr. Hine's Gladiolus-Lily cross
showing peculiar spawn or cornel
growth on side.

gave fine seed and good seedlings unlike any previously grown.

It seems better therefore, to get results worth while, to use Gladiolus pollen in the ordinary way, and in addition, that from the different flower one wishes to try.

The shape of some corms from these experiments is different from the common form, while others are just the same.

When one gets a better average lot of seedlings in this way and different from those previously grown, it surely seems worth while to try to get the flower of both in bloom together. What may result from crossing with ordinary varieties, is "just around the corner" and the uncertainty seems most fascinating.

Why not "all together"? let everybody try!

F. M. HINE.

REMEDY FOR CUTWORMS.

I notice in the July issue of THE MODERN GLADIOLUS GROWER on page 94 a request for experience in destroying cutworms. I have found the use of poisoned bran very effective. Take 30 pounds bran, 1 pound paris green, 1½ quarts molasses, and water enough to moisten it. In small quantities mix enough paris green with the bran to give it a slight greenish tinge. Sprinkle this at night along the rows of Gladioli or other plants, and renew it two or three times a week.

The cutworms start their depredations early in May, or even in late April, and continue until about the middle of June. If the poisoned bran is put down over the garden plot before any of the plants appear, it will kill many of the cutworms, which are eager for something to eat. You will find them in large quantities around clumps of hardy phlox, sometimes as many as twenty being found at one time. A small handful of the poisoned bran scattered about each clump will clean them out.—EDWIN C. POWELL, Editor, *Farm and Home*.

LOOK AFTER YOUR LABELS.

The joke is on me this year. I have a large number of people living near by who work in the mills and who have little gardens and are fond of flowers. I concluded this spring that I would abandon all mixed Gladioli and plant only the named varieties. Therefore I concluded that it would be a good thing to divide up my mixed ones among these mill people and did so. Now that mine are blooming I find that I have given away about 2000 *Americas* and planted the mixed ones myself. The labels evidently got changed in the crates where they were kept and the mill people will have the best flowers. Some other scarcer named varieties were saved, but anyway I will have made some people happy who are not able to buy, though I am very short of *Americas*.

W. F. MASSEY.

WIREWORMS.

It may interest your correspondent "H. G. R.," who writes in the July issue concerning wireworms, to know that I have had two English gardeners, both of whom called the "thousand leg" or "thousand legged worms" by the name of "wireworms." I judge, therefore, that these are the worms referred to by Walter P. Wright in his work on "Garden Flowers."

CHAS. S. SHELDON.

HINTS FOR THE BEGINNER.

BY FRANK S. MORTON

CUTTING BLOOM SPIKES—RAISING SEED-
LINGS—GROWING MIXED VARIETIES
FROM BULBLETS.

August is the month in the north when one expects the choicest blooms from his Gladioli. While many plants started at normal times mature and blossom in July, the large proportion are August flowering. The results of all the work of the season are now shown. It will be surprising to find the number of plants that were thought to be weak and sickly that have formed flower spikes and stuck their heads up proudly among their more sturdy neighbors. When one thinks of the ravages of the cutworms and all the tribulations that the young plants have to go through before blossoming, it is wonderful to realize the vitality and recuperative powers of this flower.

If one intends to gather together a collection of bulbs for future years, care should be taken when the flowers are in bloom to mark desirable kinds and to weed out undesirable ones. If bulbs were bought in mixture probably some of them may be especially good and if so these can be marked with a label describing it or giving it a number referring to a description elsewhere. In this way desirable kinds may be increased by themselves and better controlled. If you wish to retain them in mixture indefinitely there are a few things that should be done each year to keep the mixture well balanced. First note if any particular kind predominates in the mixture. If so it is probably a good producer and makes bulblets freely. In this case these should be marked or tagged in some way so that in digging, too large a proportion of bulblets of this one kind are not carried over with the mixture. A simple way to keep a mixture well proportioned is to have colored tape or string and tie a red string around the red flower stalk, a white around the whites and so on, so that in digging a rough separation may be made and the proportion of bulblets for next year evened up. If something of this kind is not done the varieties which produce bulblets freely will in a very few years largely outnumber those that are less prolific and this gives rise to the oft repeated statements that varieties mix up and deteriorate as years go on. Individual bulbs deteriorate in time, but varieties mix only through seed.

If it is desired to try raising from seed another year, now is the time to save the

seed. Select the plant from which you wish to get the seed, and after the lower or first blossom withers, cut off all but three or four of the buds. Seed pods will soon form, furnishing all the seed desired. Cross pollinizing is easily done at this season, following out the directions given in earlier numbers of THE MODERN GLADIOLUS GROWER. It is not too difficult for a beginner and the sooner one gets started in raising his own seedlings, the sooner he will see the resulting blossoms. Raising from seed is easy and interesting and right now is the time to prepare for it. Simply do not pick the flower if you wish seed—let it go to seed—and you will get bee pollinized seed. If you want your own crosses, a few minutes a day will get them easily.

Remember that in cutting flowers, four or more leaves should be left to mature the bulb. It is generally understood that the sooner the flower is cut after the first bud opens, the better will be the bulb, but one can be governed wholly by choice in this matter, and if cultivation and careful fertilization has been attended to in the growing period, the bulbs will as a rule be all right for another year, even if you do not immediately pick the flower. The same latitude is possible here as in many directions with this flower, and the amateur can come nearer to "having his cake and eating it" than with most any other flower.

An enemy that attacks the Gladiolus at this season of the year at times is a green worm that crawls up the stalks and feeds on the buds. If holes appear in the buds the chances are that a green worm is curled up inside, and if so, he should be gotten rid of at once or he will do lots of damage. These worms can be easily shaken off and killed, and fortunately they are seldom numerous enough to do very much damage without being found out quickly.

The Garden Club of Alma (Mich.) wishes to announce the second Gladiolus Show under its auspices to be held on the wide porches of Mrs. J. H. Lancashire's house on State street, on the afternoon and evening of Wednesday, August 25, 1915. The entries for competition must be in before 10 a. m. and arrangement of the same completed at 11, at which time judging begins. A fine list of premiums has been offered by Alma people, also by out-of-town parties. Everyone interested in Gladioli will be cordially welcomed.

MRS. EZRA SMITH,

Chairman Gladiolus Group.

Growing Darwin Tulips.

BY RAYMOND W. SWETT.

IT is very hard for one who has never grown Darwin Tulips to realize the almost unlimited possibilities of the varied uses to which they readily adapt themselves. Their tall, stiff stems raise the beautiful flowers fully twenty to twenty-four inches and withstand the wind so successfully that they may be used for bedding out in the most exposed situation. In fact they are better adapted for bedding than the earlier sorts as they bloom at a time when the heavy rain and wind storms are past. How many times have the early varieties flowered out only to be beaten down and destroyed by the cold driving rains of early Spring? Then too the Darwins bloom at a time, in this latitude, when all flowers are scarce and valuable—Decoration Day.

Some of the brighter sorts, such as *Pride of Haarlem*, *Mr. Farncomb Sanders* and *Europe*, make a most beautiful subject for planting amongst shrubbery or the ever-green borders. They are so tall they may be used pretty well back from the edge and so make all the more show, while the earlier sorts being dwarf, can only be planted along the front and edges.

It is to be regretted that there is no good yellow in this class at present within the reach of all our pocketbooks. *Yellow Perfection* is a fine Darwin but, at present too high priced for use in any but exceptional cases. Still we have a very fine, golden yellow color in *Gesneriana Lutea*, a late single or specie that seems to appreciate just what is needed and lends itself perfectly to the task.

One of the most beautiful borders I ever saw was made up with *Feu de Artifice* and *Painted Lady*. In this case I was obliged to cut the expense account as low as possible and so, used these two rather inexpensive varieties. Three rows of the bright red *Feu de Artifice* were on the outside as it does not grow as tall as *Painted Lady* whose pure white made a most striking contrast. This border was four feet wide and I used twenty tulips for every running foot.

For all bedding I have always advised the use of named varieties rather than the mixtures because by this means only can a striking mass effect be obtained. And at the same time if one does not wish solid colors in one bed it is easy enough to take several varieties whose colors blend and whose style of growth are known and fill the bed so as to get a har-

monious color and shape to the finished product.

The mixtures are usually made up from odds and ends, poor sellers and seedlings of little or no value, so it usually happens that when a mixed bed is in flower one of two conditions result. Either the flowers of different varieties bloom one at a time, dribbling along so as to make a spotted effect in the bed and never an attractive show, or else if they all bloom at once, the colors are so mixed as to clash, and instead of a pleasing color scheme there is a constant feeling of dissatisfaction, and the pleasure is lost.

Last year I went to the trouble and expense of getting one hundred and fifty different varieties of Darwins to plant out so that I could compare the actual relative growth and color of the entire lot. The results more than repaid me for the trouble and expense as in no other way could I so well familiarize myself with the characteristics of so many sorts. And out of the entire lot there was not one but what was beautiful and would be very valuable in some particular bit of work.

For instance, I was able to show some of my best customers the actual color of blooms I intended to use in their beds and borders and I was agreeably surprised to find that in most cases any of the cheaper varieties could be used in most any combination. But those with which I have had especially good success are *Barrone de la Tonnaye* and *Gretchen*. I have made up a great many circular beds using one hundred *Tonnaye* in the center with two hundred and fifty *Gretchen* for the outside, and these colors blended finely. Another popular combination is *Gretchen* with *Farncomb Sanders*. A bed of solid *Pride of Haarlem* is hard to beat for a bright scarlet show. Or *Pride of Haarlem* with *Gesneriana Lutea* makes as bright a display as any could imagine.

Ariadne is one of the larger flowered, long stemmed brilliant scarlet sorts, excellent for backgrounds. *Clara Butt* is a very good medium tall salmon pink, easy to force and a popular bedder. *Mad Krelage*, a soft lilac rose with a broad margin of blush pink, is extra fine in mixed beds as it is a color that blends well with most Darwin colors and being of average height fits in anywhere. *Massachusetts* is about the brightest pink and being such a large flower it seems even brighter than it really is. Several of the darker ones such as

Faust, *Beethoven*, *Harry Veitch*, *Louis Langhardt* and *La Tulip Noire* are valuable rather as oddities and novelties of colors as their dark purplish color does not render them useful in bedding.

As cut flowers Darwins are hard to beat. If left on the plant for forty-eight hours after it opens then cut and put in water it will enlarge and grow to nearly double its size. By keeping them in the coolest part of the room and giving fresh water every day they will easily last a week in good shape. A vase in the window where the light can strike through the flower will bring out some beautiful shades not obtainable in any other flower.

Another pleasing thing about Darwins is this: They will flower for more than one year and do well enough to amply repay one for the time and trouble of digging the bulbs. It is best to leave them in the ground for at least two weeks after the flowers drop or are cut off or, if possible, until the foliage dies down. Then dig out the bulb, drying it in the sun before storing away to plump up and get ready to be planted out again next Fall.

There is a great difference of opinion as to the proper time and method of planting Darwins. Some advise extra early, some extra late and some claim they should be planted at the same time as the early varieties. In my experience it is best to plant them the first or second week of October. That is right after the earlies are put in. I do not believe the bulbs will flower earlier or later by planting early or late. Last year I planted some September 15 some December 15 and some as late as March 15 and they all flowered at the same time, from May 25-30. Where we have such hard winters I advise planting at least five inches deep and after the ground has frozen solid, by January 1, give a good mulch of leaves or straw. This mulch should not be removed too early in the Spring or an early growth will be frozen down. Let the Tulips show an inch out of the ground but not through the mulch before uncovering, then be very careful not to break off the tender shoots.

I was pleased to notice in going around among the large well managed estates so plentiful hereabout that Darwins are used by the thousands now where a year or two ago only a few were planted. It is not surprising because these flowers certainly are the queens of the Tulip world and are here to stay. The wonder is that there are not more of them used, and I predict there will be as soon as the greater mass of people, those with the small flower beds, realize not only how artistic and beautiful

they are but also what a lot of enjoyment can be realized from such a small expenditure.

Mixing Labels—Suggestions for Marking.

Prof. Massey in our "Wayside Ramblings Department" this month offers a very pertinent suggestion about labels. This is one of the hardest problems of the Gladiolus grower, either large or small, and there is probably not a single grower who cannot tell a hard luck story about getting labels mixed, losing some of their best varieties in mixtures, &c.

The commercial growers have various systems which they use to avoid mixing or wrong labelling, but even at best, carelessness and error creep in and trouble results.

The Editor uses 12 inch pine garden stakes marked with blue pencil for marking the rows in the garden, and at digging time it is quite easy to put this stake with the name on it right in a box, tray or bag in which the corms are placed. It is a pretty good plan to have these labels in a location not too conspicuous and certainly not laid on top of the corms, but rather stuck down at one side. It is so easy for the average person to pick up a label and put it back in the wrong place. As much care as possible should be used to not allow access to the storage room to outsiders except when accompanied by a responsible person, and the stock in storage should be in charge of one person or two persons at most. Some of the larger growers have lost a good many dollars when they lost some of their rare varieties among their mixtures.

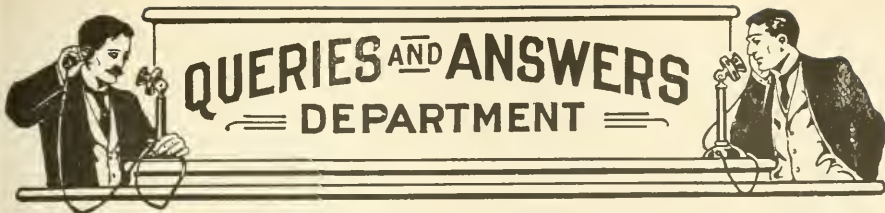
Suggestions to avoid mixing labels and for clear and concise methods of marking will be gratefully received and helpful to those who suffer. The experience of both large and small growers is desired.

MADISON COOPER.

"Intensity."

(Subject of illustration on front cover.)

This is one of the Groff's Hybrids, selected and carried under field number by Arthur Cowee, Berlin, N. Y., until 1910, when it was named and catalogued by him. The color is a rich, light scarlet, the three lower petals being spotted with white with a deep scarlet vein through the center. Flowers are large and well arranged on a strong spike. Foliage broad, dark green, and exceptionally healthy.



QUERIES AND ANSWERS DEPARTMENT

[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Gladiolus Corms Produce Plurality of Sprouts.

TO THE EDITOR:—

I have planted 425 Gladioli this year. These were secured from reliable firms. About two-thirds of them are sending up from two to three sprouts, and a few of them have four sprouts. Should all of these be left to grow and will so many sprouts result in inferior and small flowers?

I have been growing Gladioli for several years but have never had the result above mentioned before. *Peace* and *Europa* have two sprouts.

Are bulbs which behave in this way first class? The price paid should warrant my securing the best stock. Local members of our Horticulture Society differ in their ideas on the subject and I naturally turn to you for an answer. Any information you can give would be gratefully received.
H. A. Q.

Answer:—Some varieties of Gladioli throw two flower spikes with considerable uniformity. As they become old they will throw several sprouts but they will often lack the flower spike. The larger number of sprouts from a single bulb the less liability of getting a good flower. It is probable that the reason for getting so many sprouts from a single bulb in your case this year is that the bulbs you have planted are somewhat advanced in years and there is a tendency to divide. Very often some of the largest corms will start several sprouts and none of them will bloom. The corms of these plants will, however, for the most part and under good tillage, be fairly strong for another year's planting.

It is not advisable to reduce the number of sprouts which naturally form as it will reduce the number of new corms you will harvest without materially increasing your flowers.

The corms you have planted would doubtless be considered first class. Gladiolus corms are sold on a basis of size only and any corm above $1\frac{1}{2}$ " is a No. 1 corm. Some corms of this size and larger are almost worthless for planting for flowers as they are "worn out" as the expression is.

We believe that commercial growers

make a mistake in selling only first size corms to amateur growers as these large corms will give good bloom with certainty only for a year or two and then the bloom gradually deteriorates which is naturally discouraging to the amateur. It would be far better if the amateur was furnished a mixture of 1st, 2nd and 3rd sizes, as then he would have large, young corms for best bloom every year while his stock of cormels was maturing to blooming size.

It is certainly not conclusive evidence of extra good bulbs that they throw a plurality of sprouts. It is, generally speaking, more an evidence of weakness and old age, although please remember what is said above, that some varieties quite regularly throw two or more flower spikes from a mature corm.

MADISON COOPER.

Gladioli on Same Ground Successively.

TO THE EDITOR:

This year I planted Gladioli on same ground they occupied last year. Many cormels that had been left in the ground over winter have kept coming up, and there seems danger that some cheap stuff will be mixed with valuable sorts. What can be done other than use new ground each year?
C.

Answer:—With the amateur it is, of course, desirable to plant Gladioli in the same ground year after year, and where this is done it is practically impossible to avoid getting varieties mixed by the coming in of "volunteers" from bulblets of the crop of the year before. The only thing that you can do now is to pull up the volunteers as they appear, but, of course, if they come in where you have cormels planted this will be impossible as they cannot be distinguished. The small sprout of the cormel, however, is easily distinguished from the large sprout of the corm and hence "volunteers" among corms may be disposed of by pulling them up as suggested.

We are informed that in Holland and Germany some of the growers grow the same variety in the same "block" year

after year, and this avoids a mixture of varieties, but this would be impracticable for the amateur and only slightly less so for the average commercial grower. Most commercial growers in America change their planting site from year to year and we believe that a three year rotation is all that is necessary. That is to say that if two other crops intervene between the crops of Gladioli there will be no danger of the survival of cornels for a longer period. In fact it is probable that few if any would survive more than a season.

Aside from the danger of mixture as outlined, it is very desirable to grow other crops in at least a three year rotation and at least one green manure crop to be ploughed under if possible.

Remedy for Cutworms.

TO THE EDITOR:—

Your magazine is splendid from cover to cover. I am a farmer and cattle breeder but also a very enthusiastic grower of Dahlias, Gladioli, Iris, Peonies, Phlox, Asters and Sweet Peas, and although I've been at it for years, am just finding out how little I know in spite of the fact that my flowers have brought me many blue ribbons and trophies.

In your July issue you ask for a history of the cutworm and remedies for same. Probably many of your readers can give you a better and more complete history of this rascal than can I, but no one has a better remedy I am sure. I spread 100 lbs. of bran on the barn floor and sprinkle it with sweetened water, just enough to make it crumbly, then over this sprinkle one pound of paris green and rub it in well with the hands.

As these fellows get in their work after sundown it should not be made till evening, and as it is easily blown away, should not be put out till dusk. In my garden I have always scattered it broadcast and never noticed any bad effect on plants except that it will injure young fruit trees if it comes in contact with the bark. It will get the worms in one night—they are very fond of it. It might also be a good plan to keep chickens away from it till after cultivation.

As to preventive measures I presume the best one is to keep all litter cleaned up and offer our old friend, the "miller," as few favorable spots as possible wherein to deposit eggs, for I understand this moth is responsible for cutworms.

I wonder if some of your readers could tell me where to get treatises on the Peony and Iris?

Sometime I hope you will publish some

experienced grower's ideas on the best methods of growing Sweet Peas and Asters.

J. E. MUNROE.



Cutting Foliage with
Flower Spike.

In an article in the February, 1914, issue entitled "Cut Flowers vs. Bulbs" we called attention to the fact that the producing of a flower spike meant loss of vitality to the corm. It was also pointed out that the cutting of much foliage with the flower spike results in a dwarfing of the corm. We are pleased to illustrate this point in the photograph. Mr. Carl R. Hinkle, who sends us the above photograph, states that the variety, age, size, place and time of planting as well as the time of digging were identically the same with both corms. While this is not necessarily positive proof, it illustrates the point nicely and we all know that much foliage should not be cut with the flower spike if a reasonable growth is expected from the attached corm.

We would be glad to have reports from amateur growers on their success or non-success with the use of chemical fertilizers, sheep manure, etc., during the growing season. We regret that more accurate information is not available, especially as giving the exact quantity to use for a given area.

Artistic Effects in Horticulture.

[Continued from page 106.]

Rossini, etc., all in the most striking blue and violet colors.

For later blue shaded flowers the Gladioli *Adeline Patti*, *Baron J. Hulot*, *Blue Jay*, *Faust*, *King of the Blues*, and *Master Wietze*; the single and double blue Anemones, Delphinium, Phlox, Aconitum Fisheri will do nicely and in this way blue or blue shaded flowers can be found in each garden from the time the snow is gone till Jack Frost comes to his own again, when nothing is with us till Spring but the blue ocean, sky, and eyes.

The growing of seedlings is certainly a fascinating pursuit. If you grow from seed from your own crosses, it is exceptionally interesting, but if you have no time for cross-fertilizing yourself, buy the seed produced by others and you will get a lot of pleasure out of it. Each new variety as it blooms is distinct from all others.

RARE PEONIES

Therese, Mon's, M. Cahuzac \$3 ea. Send for list of largest collection of continental and European varieties—Marcelle Dessert, Solange, Tourangelles, Primevere, Mignon, Alsace Lorraine, Mme. Auguste Dessert, Baroness Schroder, etc.

**D. W. C. Ruff, Buena Vista Gardens,
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"I wish you could see this stock growing. Finest I ever saw."

This is what a Chicago grower says about 15,000 second size America sold him in April, 1915.

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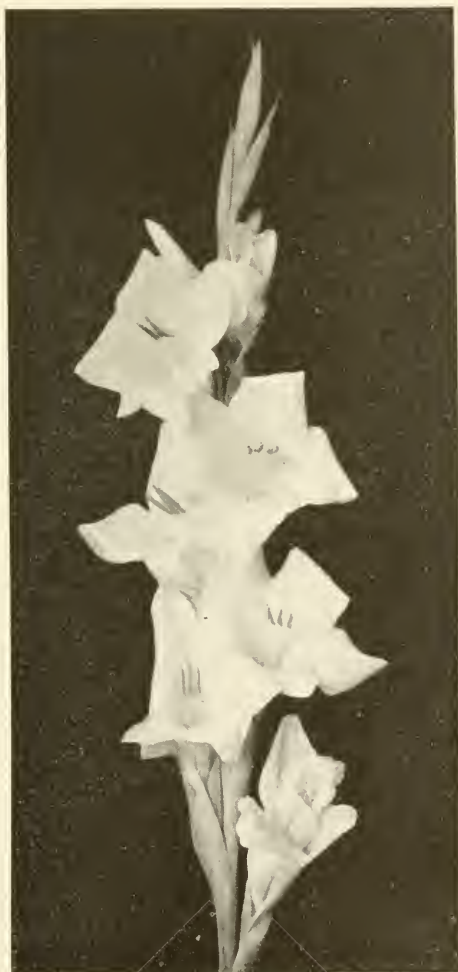
Published Monthly by Madison Cooper, Calcium, New York.

Vol. II.

SEPTEMBER, 1915

No. 9

Chicago White is especially valuable to florists because of its fine forcing character and earliness, being nearly two weeks earlier than *Augusta*, and by many considered a better white than that famous old standard white sort. It was originated by A. E. Kunderd about a dozen years ago, and was sold by him to Vaughan's Seed Store in 1912. For several years before Mr. Kunderd sold the variety to Vaughan's Seed Store he observed that florists invariably selected this variety when they visited his fields, and



it was in this way that it became known to quite a number of able florists who tried it out in their greenhouses and in this way its earliness and general good qualities were discovered. Although of great merit to florists when outdoor grown, it is especially fine when properly forced on the benches for early spring flowers. Mr. Kunderd predicts for *Chicago White* a great future among florists and it is expected it will largely supersede the *Augusta*, until now the best forcing florists' white variety.

GLADIOLUS—CHICAGO WHITE.

The Gladiolus Manual.

By W. W. WILMORE, JR.

CHAPTER V.

The Scientific Structure of the Plant.

IT is not the purpose of the author to here give a lesson in botany other than to familiarize the reader with the structure of the Gladiolus to enable him to thoroughly understand its needs, its habits and its modes of growth. In the following a rough outline of the plant will be given.

The Gladiolus is a monocotyledonous plant which reproduces itself in three distinct ways, (1) by seeds, (2) by offsets or cormels, (3) by divisions of the corm.

Let us first study the flower and its seed production. It consists of four separate parts, (1) the sepals, (2) the petals, (3) the pistil, (4) the stamens. The sepals

The stigma is the apex of the pistil. Its duty is to catch the pollen grains which are essential to the fertilization of the seed. At its receptive state it excretes a liquid similar to syrup and in some flowers it is very sweet. The pollen grains adhere to this pubescent condition causing them to form a root known as the pollen tube which grows downward through the style which is the connection between the stigma and the ovary. The ovary is the immature seed pod which is three celled and many seeded containing the ovules or rudimentary seeds.

The stamens consist of two parts, (1) the anthers, (2) the filament. The latter supports the anther, holding it above the stigma. The anther contains the pollen which at maturity bursts and sheds the flower-like grains. As the flower opens, the anthers ripen, the stigma becomes receptive and the work of pollination is begun. The pollen grains are held to the stigma by the sticky excretion before mentioned. They start the pollen tubes which grow downward through the style to the ovary. As the tube punctures an ovule it becomes fertilized and starts its growth to maturity. We are lead to believe that the pollen grains of dark flowers have a tendency to transmit their color to the ovule causing the seedling of this seed to bear dark colored flowers. In fact, the pollen grains of any colored flower transmit its color to weaker colors but if a grain from a white flower fertilized the ovule of a dark flower the stronger color would predominate. It is also a theory that the cause of variegated flowers is that two distinct pollen tubes from different colors penetrate the ovule at the same instant, causing fertilization by both. As soon as the ovule has become pollenized the corolla begins to fade and closes over the ovary for protection. When the seeds become ripened the pod bursts from three sides displaying many seeds all equipped with a broad wing to enable them to travel by the wind to different localities where they may bury themselves in the earth to germinate and grow.

We will next follow the seed in its growth. First, three elements are necessary to germinate the seed, (1) moisture,

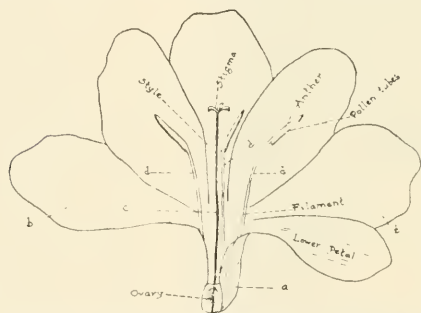


Diagram of an open Gladiolus bloom, showing its generative organs in their relative positions. a—Sepals; b—Petals, which taken together form the corolla; c—Pistil; d—Stamens.

taken together constitute the calyx which in this case are spathe-like bracts which cover the ovary (seed pod) and encase the flower while in bud. The petals taken together form the corolla or showy part of the flower. It is for the purpose of protection to the pistil and stamens and to attract the attention of passing insects that they may be invited to come and suck the nectar from the blossom and at the same time deposit on their hairy bodies quantities of pollen for them to carry with them to their next stop, which when they come in contact with the pistil will deposit enough on the receptive stigma to cause fertilization of the seed pod which will be taken up later.

The pistil consists of three parts, (1) the stigma, (2) the style, (3) the ovary.

(2) heat, (3) air. The chemical action of these three elements under favorable conditions causes the seed to burst the testa or shell in which it is enclosed, which in the case of the Gladiolus is very thin. In fact the seed of the Gladiolus is in appearance a tiny corm. The hypocotyl which is the stem between the first leaf and the root, pushes its way to the surface, after which the first leaf appears. At the time the hypocotyl is making an appearance the primary root is being formed from which the secondary root appears. As this system grows and enlarges, the feeders develop more rapidly until the earth in a radius of two feet, more or less, compared to the size of the plant, is filled with roots. We may judge the root system of the Gladiolus by comparison with that of the oat which by an actual experiment if each root were cut off and placed end to end the total distance would measure 154 ft.

Some time passes before the seedling Gladiolus forms a corm. The primary roots which generally number from three to five gather quantities of nourishment storing it in themselves which causes an enlargement of the roots giving them the appearance of tubers rather than the roots of a corm. When these roots have gathered enough food to develop the corm, a tiny enlargement begins at the junction of the roots and the hypocotyl which after a short time forms itself into a corm which becomes mature when the nourishment stored in the enlarged roots is transmitted to it.

At maturity the one year seedling corm has formed what may be termed a zone for each leaf it has made, which shows that the growth takes place from the center at which is located a strong eye or dormant sprout. Each zone is also equipped with an eye which is capable of germination should the central eye become injured. In this case the next strongest eye would predominate. In matured large corms especially those which have served much time and become flattened by age, several of these eyes will start from the different zones, causing the plant to divide into several smaller plants. This process is known as natural division.

At the end of the second year's growth a new corm is formed on top of the old corm where the sprout started. This mode of growth is continued year after year, the size of the new corm continually increasing until a certain size is attained at which the corm divides and the process continues.

The corm is covered with a husk which is in reality the base of the leaves, their

junction with the corm determines the different zones. They become heavier as the corm ages as do the leaves become thicker and stronger. In addition to the new corm each year, underground stems are provided which bear cormels or minute corms which are a medium between the seed and the corm. In shape and texture they resemble the naked seed but are much larger and always reproduce the mother plant, a feat which is not in accordance with the seed unless it be of a true species. They grow much faster than the seed, being richer in starch food. They are often known to bloom the first year which is seldom the case, if ever, with the seedling. This class of corms produce more offsets than do the larger corms, especially during the second and third year of their life, and at maturity produce the largest and strongest plants.

Let us next study the structure of the combined plant which consists of four parts, (1) the corm, (2) the roots, (3) the leaves, (4) the flower stock. The corm resembles much in appearance a bulb, but differs from it by being solid throughout. (A bulb is made up of more or less close fitting fleshy leaves). We have partly described the corm and its functions in a previous paragraph, but to make it more complete we will cover the ground again. The corm is in reality a store-house for the plant. It is rich in starch food to feed the plant when necessary and to enable it to live long under adverse conditions. It is protected by a husk which is the base of the leaves growing to it and supporting the particular section or zone as we have termed it that they are connected with. Cormels are the offsets, not small divisions. They are commonly known as bulblets which term is incorrect. (Bulblets are small bulbs borne above ground generally in the axis of the leaf.) The roots are for the purpose of gathering food and drink for the plant and to hold the plant in place. The leaves have four functions to perform, (1) starch making, (2) excretion, (3) assimilation, (4) respiration. We are shown that the sap or raw materials gathered by the roots travels upward through the fibro-vascular bundles which are located under the bark and in the pith of the flower stock. It then travels out through the veins of the leaves and is assimilated and sent back through the sieve cells to the corm.

The flower stock is for the purpose of bearing the fruit, the seeds. It will be noted that any injury to any important factor will injure the plant in general and cause a weakness at maturity, such as removing leaves with the flower spike,

disturbing the roots, poor soils, sucking of the sap by insects, diseases, etc. We may, however, deprive the plant of its bloom without injury, because the bloom does not support the plant. In fact, it strengthens the plant to have the bloom removed as it taxes the plant to produce the bloom.

Cutworms.

In the July issue we asked the question if some one could tell us about the life history of the cutworm, and shortly thereafter we ran across an article in *Farm News* by C. R. Jones of the Colorado Agricultural College and from which we quote as follows:

"The brownish moth lays the eggs for this generation late in the summer or early fall on grasses. The young cutworms hatch and feed upon the adjacent vegetation. With an abundance of food the small larvae attract very little attention, burrowing into the ground during the day, and feeding only at night. At the approach of winter the larvae, which are about half grown, burrow into the soil and hibernate, coming up again the next spring and feeding upon whatever vegetation is at hand. Their depredations continue until the middle or latter part of May, when they become full grown and burrow into the soil about two inches, and there transform to pupae and adult. About the middle or latter part of June, the moths emerge, and cause no little annoyance by entering houses and fluttering around the lamps at night.

"Under ordinary conditions prevention is the best remedy. Plowing in the late fall or early spring, with frequent disking or harrowing, will be effective. In areas where the worms are concentrated, an application of arsenical bait will prove effective. A good formula is as follows:

"Paris green, $\frac{1}{2}$ lb.; bran, 50 lbs.; syrup, 1 qt.; water, 2 gals.

"Mix while dry the paris green and bran until an even color is attained. Then stir the syrup and water, making a crumbly, but not sloppy mash. Scatter this mixture thinly over the infested areas in the afternoon or early evening. The amount to be used will vary in accordance with the severeness of the attack, but ordinarily, 25 to 40 lbs. is sufficient to cover an acre."

We are inclined to believe that an accumulation of litter in the garden is largely responsible for a surplus of cutworms.

The Gladiolus.

The Gladiolus is better adapted for general cultivation than any of the many rare and beautiful flowering bulbs. It is remarkable for ease of culture, grace of habit, beautiful form and intensity of colors, ranging from vivid scarlet to pure white, from rose to yellow and bright purple; in many of the species the colors are wonderfully and beautifully blended.

Gladioli are effective between roses, phloxes, dahlias and subjects of somewhat similar character, and also in clumps alternating with tritomias and when associated with masses of cannas, while they are suitable for intermixing with plants whose dark foliage shows off the rich flowers to advantage. Those who desire their gardens to be beautiful late in the autumn should not fail to employ the Gladiolus largely, as it is the handsomest of the late blooming gardening plants, and its spikes show to great advantage about the time of the heavy autumn rains.

When spikes of extra fine bloom are required it is necessary to give special treatment, and an open situation is of the utmost importance. A deep, loamy soil, not too heavy, is the most suitable for producing exhibition spikes, but very satisfactory results may be obtained by deep digging and liberal manuring in soils of an uncongenial character.

The planting may be done at intervals of a week or two apart, to secure a succession of bloom, from the middle of April until the first of June.

When the spikes are cut, the flowers will last longer if cut before the lower blossoms have opened. When the spikes are placed in water the flowers will go on expanding until every flower is open, often continuing for weeks in full beauty.

—*New York Sun.*

THE MODERN GLADIOLUS GROWER has been greatly helped by the sending of sample copies to people whose names have been sent us by our subscribers, and we appreciate favors of this kind greatly. If you know of anyone in your vicinity growing Gladioli who would likely be helped by the facts and information which every issue of THE MODERN GLADIOLUS GROWER contains, it would be doing these people also a favor by sending names and addresses so that we can send them sample copies. We expect to send blanks for this purpose to all subscribers, but in the meantime, you can help us greatly in the way suggested. All Gladiolus growers, even small ones, should have THE MODERN GLADIOLUS GROWER.

MRS. AUSTIN'S TALKS FOR AMATEURS.

THE NEW GLADIOLI AND SOME OF THEIR USES.

To those who have been growing Gladioli, trying to train and direct their tendencies for many years, it has seemed strange that the public was so slow in becoming interested, but we have assurance now that people are waking to the great beauty and value of this flower. How many times this season have we heard the remark: "We never thought much about Gladioli until the last year or two, but now we are crazy over them." The most extravagant praise is not unmerited nor unexpected, and yet the majority of these new converts to the Gladiolus know only of one of the great varieties, the *America*. However, the plant breeders have been busy and people who have been privileged to visit their gardens of seedlings, or those who have attended the recent shows where a few of the new ones have been exhibited know a little something of the new "creations." The retail florist, in quick appreciation, has shown the public that the Gladiolus can be used with equal if not greater beauty in the various decorations and arrangements of their profession. Who would have thought, even five years ago, of using the Gladiolus for a bride's bouquet, but there it was, at the last show, made of pure white sprays with a shower of detached buds fastened to narrow white satin ribbon and tied with white tulle.

There were corsage bouquets for hostess and guests, and some of the new *Primulinus* Hybrids with their delicate pastel shades and dainty forms are especially desirable for this use.

Gladiolus sprays for pianos, buffets and mantels are something new, and the new Gladiolus, *Gretchen Zang*, in the most beautiful soft melting shade of pink is of superlative value for such arrangements. This variety throws an occasional waved spike which adds to its decorative value.

Great bowls of the gorgeous *Mrs. F. Pendleton* and vases of glistening *Golden King*, another which furnishes an occasional drooping spike, add attraction to the veranda or teahouse.

A large cylinder vase of one hundred and fifty or more of the *Evelyn Kirtland* Gladiolus with its tall, slender spikes, averaging over five feet, weighted with twenty buds and blooms of which there are often ten or more open at one time, presents a sight not soon to be forgotten.

The dinner table topped with creamy clusters of *Niagara* in baskets and small baskets to match tied with gold lace and tulle, or for those who cannot have a florist at their elbow, a crystal vase for the center and tips of bloomed out spikes placed at each place is very decorative. There are other things besides the floral decorations necessary to make the dinner table attractive, and a word in regard to the correct setting of the table may not come amiss here.

The table linen which should be the best you can afford, must be absolutely spotless, ironed smoothly on the right side to bring out the gloss and folded evenly. The service plate should be an eight or ten inch plate and the soup or oyster cocktail served in soup plate or small plate placed on the service plate. At the right of the service plate should be the dinner knife, beside it and to the right, the fish knife, next the soup spoon and then the oyster fork, which is usually placed with the tines pointing up and resting in the bowl of the soup spoon. At the left of the service plate should be the dinner fork and to the left of that the fish fork. The goblet should be placed at the point of the dinner knife and the bread and butter dish at the left and point of the forks. Between the goblet and the bread and butter plate should be placed two spoons, the small after dinner coffee spoon sidewise to the plate and the full sized spoon beside it. Napkins always at the left side of the forks.

MRS. A. H. AUSTIN.



Although shown on a rather small scale, the above cut will serve to give at least a hint of the attractiveness of the deep, royal blue of *Baron Hulot* contrasted with the clear orange and yellow tints of *Primulinus*.

The Little Lady's Choice.

The little lady who lives in the little bungalow has some ideas of her own about the general fitness of things. Her girlhood was spent in a middle-west country town and fond memories cluster about the clumps of wild roses and elders that bloomed in the pasture lot every spring.

So, when her little bungalow was built, the man of the house was given some very definite instructions concerning what he was expected to do. He was started out early one fall morning with com-

graceful stalks that allow only glimpses of the background of cobble stones.

In May and early June, when the odor from the elder fills the air and it contrasts the creamy white of its blossoms with the garlands of pretty pink roses, the little lady sits on her porch and basks in the fragrance and beauty of it all. She feels that she has accomplished something a little out of the usual by adopting and using one of nature's own groupings, and when the occupants of some passing automobile exclaim, "How pretty," the flush in her cheeks rivals the pink of the roses.
H. W. M.



A planting of elder and wild rose. A charming combination so unusual as to attract attention. Home of Harmon W. Marsh, Indianapolis, Ind.

mands to bring home—not fancy shrubs from the nursery, but from the woods, half a dozen roots of common elder bushes, the kind that have the sweet, white blooms and later the purple berry clusters, and one wild rose bush, the kind that covers itself with single, pink flowers once each year.

An hour with the spade and wheelbarrow sufficed to complete the job. A cobble stone porch and steps occupy about half the front of the bungalow. The elders were planted across the bare end of the house and the rose in the angle of the porch and steps.

The next spring the foliage fairly draped the house front. That was five years ago. To-day the elders present a mass of foliage, while the rose has festoons of

Europa is Weak.

Practically all growers unite in condemning the weak constitution of *Europa* and at the same time they practically all unite in admitting that *Europa* is the purest white. Why is *Europa* weak, and why can we not grow it successfully? The Editor planted several hundred corms of *Europa* in his garden this spring, and a considerable proportion of them failed even to start foliage. Some plainly defective corms of his own raising, (planted by themselves and marked "defective"), produced surprising results and some very good blooms. Possibly *Europa* needs to become acclimated to its surroundings in this country. We expect that next season we will have even better results.

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
PUBLISHED MONTHLY ON THE FIRST OF THE MONTH BY
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Special favors to none, and a square deal to all.

Canadian and Foreign
Subscription Price
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Growers are invited to contribute articles or notes over their own signatures, but the Editor reserves the right to reject anything which in his judgment is not conducive to the general welfare of the business.

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Vol. II.

September, 1915

No. 9

The "Ten Best."

When, in the July issue, Raymond W. Swett had the temerity to name ten varieties which he considered best, we rather expected that there would be another story to tell, and that we would hear from a number of our readers who would venture to name another list. Certainly the ten varieties which Mr. Swett mentions are not the only best varieties by any means, and it would be very easy indeed to find fault with some of the varieties named, for if we look closely they are not without imperfections.

America, for instance, is now so well known that no one is especially interested in it, and it has its critics. *Blue Jay* is a new one and has the important quality of distinctiveness, yet it is lacking in some of the finer characteristics. It is, as Mr. Swett says, doubtless the best blue to date. *Electra* and *Empress of India* we have never had in flower. *Glory of Holland* has been reported to us as a very common white and as we grew it last year, we should class it that way ourselves, although from bulbs which were American grown, better results might be expected, and, in fact, we expect better results in our own garden this year.

Loveliness is too new to be generally

criticised and we have never grown it. *Mrs. Frank Pendleton* is one of the best advertised varieties and has positive merit without question. There are those, however, who do not like blotched varieties and we must confess that we are in sympathy with this to some extent. *Niagara* has very positive merit we all know, but its short flower spike is certainly a drawback, and perfect spikes are difficult to grow. *Panama*, a distinctive deep pink, had a great furore and has much merit and is wonderfully strong in its habit of growth, but we confess to feeling that there is something lacking in *Panama* when it comes to being a desirable shade of pink.

War is perhaps the best deep red to date and it is also well known. Other reds are crowding it closely for first place.

The Editor must admit that he has found difficulty in criticising Mr. Swett's ten best varieties, and as this article is written for the purpose of criticising, it must be read with that understanding. The varieties mentioned so far as we know are extra good, but, as stated at the beginning, not without criticism. We have written on the subject hoping to have others suggest varieties which they like better or rally to the defense of the varieties as above criticised.

It must be understood, and we should

not lose sight of this fact, that one's likes or dislikes are based on one's ideals, and we must remember in this connection too, that our ideals change from year to year. Therefore, any criticism must be tempered by moderation, and we should not be too profuse in our praise of a variety which we might to-day call "perfect," but in which next year we would find imperfections.

MADISON COOPER.

The Editor is continually wanting photographs. While copper face halftones cost money and also while the printer charges us extra for halftone work, yet we are more than pleased to print good photographs illustrating Gladioli or flower garden scenes in general. If you have any such you can make us under great obligation as well as help your fellow flower-growers by sending them for publication.

Status of the Amateur.

At the last meeting of The American Gladiolus Society a resolution was adopted which seems to be rather too narrow in its scope. If this resolution is actually put in force at the flower shows of the society, it will mean that few real amateurs can compete.

With the approval of President Fairbanks, who drew the resolution, we are printing it herewith and asking for comments and suggestions. While the society seems desirous of encouraging real amateurs, yet this resolution as drawn in our opinion cannot but operate in the contrary direction. We want as many opinions as possible on this subject. In writing please state whether you are an amateur or a professional. The resolution adopted is as follows:—

Each member of the Society shall, upon the request of the Exhibition Committee, notify the secretary whether he is an amateur or professional. The Exhibition Committee shall from time to time determine and establish the standing of each member of the Society as an amateur or professional after such investigation as it may deem necessary and its decision shall be final.

To secure the standing of an amateur a member must not be engaged in horticultural pursuits as a means of gaining a livelihood nor shall he permit the sale of his bulbs or flowers by any one in his employ except as hereinafter provided.

An amateur may, without losing his standing as such, dispose of any or all of his bulbs to a grower of commercial standing, the question of compensation being determined between them, provided however, that the amateur does not solicit such business nor dispose of any stock to retail or wholesale stores or seed houses or in any way, directly or indirectly, compete against commercial growers, wholesalers or retailers.

Express your opinion fully. This question can be settled correctly if we all work to do so.

Fertilizing Value of Wood Ashes.

The fertilizing value of wood ashes is dependent upon the quantity of plant food which they contain, chiefly lime, potash, and phosphoric acid. With the exception of these three, the remaining constituents have little, if any, commercial value. The composition of the ash of woods is extremely variable. Different varieties of trees will be found to have different quantities of ash, while in the same variety the bark and the twigs will give an ash quite different in quantity and composition from that furnished by the wood itself. The ashes of the hard woods, such as hickory, oak, and maple, will yield a superior quality of ash for fertilizing purposes to that afforded by the soft woods, such as the pine and the birch trees.

The effects following the application of ashes are very beneficial, especially so, since the constituents are presented to the plant in a form peculiarly suited for absorption, the potash being present chiefly as carbonate and being readily available to the plant, while the phosphoric acid exists as an available phosphate. The average composition of unleached wood ashes is: Potash, 5.5% ; phosphoric acid, 1.9% ; lime, 34.4%. The approximate value per ton of such a fertilizer would amount to \$7.50. It should, therefore, be a matter of some importance to the farmer to save all wood ashes accumulated on the farm and apply them to the garden or field.

Land treated generally with wood ashes is readily kept in good tilth, retains moisture in dry seasons and permits easy drainage in wet. These effects are probably due to the lime content of the ash which also aids in correcting the acidity of the soil. Injurious iron salts, which are sometimes found in wet and sour lands, are precipitated by the ash and rendered harmless and even beneficial. A good wood ash fertilizer, which is very often overlooked on the farm and consigned to the ash heap, is, therefore, worth more than would indicate by its commercial value calculated in the usual way.—Fred J. Holben, Penna. State College, in *Pennsylvania Farmer*.

WAYSIDE RAMBLINGS.

PREVENTING WEEDS IN GLADIOLI—SUG-
GESTIONS FOR DIGGING TRENCHES FOR
PLANTING—PERENNIALS, ETC.—
PAINTING MARKING STAKES.

TO THE EDITOR :—

This article is not intended for the experienced growers, but there may be something in it that will be of assistance to them also. I am not going to tell the way to plant Gladiolus bulbs for every catalogue gives that information, but the care of them after planting.

Immediately after planting them the dirt is raked up into a sharp ridge over the rows, and I find the iron garden rake the best tool for this work. This ridge is not disturbed until the weeds begin to sprout, and then it is raked lightly lengthwise of the row. It should not be raked again until other weeds start growth, and then rake it again. Three rakings can be given before the Gladioli are up, and the rows will be nearly level. If they are up a few inches a light raking will not injure them in the least, especially small bulbs or bulblet grown stock. I always rake mine after they are up a few inches, but if the bulbs are large, one should rake on each side of the row, and the rake can be drawn lightly through the row and the ridge taken out without injury to them. If this plan is followed there will be scarcely a weed left in the rows where weeds are a pest.

In planting a number of thousand of Phlox last fall they were ridged slightly over the plants, but not for the intention of raking them down in the spring, but to give them better protection through the winter. We are hoeing them now (June 15th) and I find that the ridging makes them much easier to hoe than if the ground had been left smooth. The hoe can be drawn through the ridge, and the earth removed immediately around the plants about an inch deep, and every weed will be destroyed, whereas, if the ground had been left smooth at planting time they would all have to be pulled by hand.

In planting all perennial plants, dahlias, evergreens and all small stock the following methods are employed: For field culture a rope is drawn taut where we wish the row, walked on and then removed. A trench is dug leaving it perpendicular on the side next the mark made by the rope, and the plants placed against the perpendicular side. You can govern the depth

of the trench according to the variety of plants you are planting. It makes no difference if the trench is too deep, for the plants can be placed against the perpendicular side at the right depth, and a little dirt drawn against them to hold them in place. If the roots are very long the dirt can be drawn in, and the roots at the bottom of the trench firmed well when the roots at the top are not covered. This is often necessary in planting evergreens.

When firming the soil one should firm it against the perpendicular side. If it is firmed away from the plants first and work toward them they will always stand erect and always be at the right depth. When firming them, commence away from the plants and gradually work toward them. If you firm them immediately at the plants first you may condemn this method.

If you are planting where there is sod it is best to dig out a fair sized hole, fill it up with mellow soil, firm it, and then dig through the center having one side perpendicular as in field planting. By digging out the earth and filling it up again you do not have to plant against the solid ground. This is an excellent way to plant clematis.

It might be timely to give some information as to the proper way to dig the trench. Dig lightly a few inches away from where the plants are to be set, then go over it again nearer the mark made by the line, and deeper. The third time dig to the line and as deep as you wish it. For iris you can dig to the line the second time for they should be planted shallow. If you start to dig at the line first you will have trouble.

The iron garden rake is an excellent tool for drawing in the dirt, and the spading fork or potato fork, is one of the best for digging the trench. A spade is generally used to dig the last time at the line, but this depends somewhat on the soil whether it is necessary to use the spade or not. The spading or potato forks are made with four or five tines. We use the four tine one mostly. The tines are flat, but some are made V shaped on the back side. In digging anywhere but in sod they are much better than a spade. If the hole which is made is large enough to stand in for tramping on the dirt, one can use them entirely, but if the land is sandy or dry and loose, a spade will be necessary to finish the hole. The spading fork may be used for digging phlox and irises and all plants that have small roots. It cannot be used for peonies. A spade is necessary to cut off the roots.

I have noticed considerable in THE MODERN GLADIOLUS GROWER about the preserving of the writing on stakes. If I wish the writing to last for years I treat the stakes thus: Take white lead and linseed oil and make a thick paint. Apply this with the finger, and write the name in the fresh paint. I often come across stakes that have been in use six or more years, and the writing is as plain as the day it was written. One year I used prepared paint, but after two years most of the names have disappeared.

WILLIS E. FRYER.

ANOTHER "ARGUMENT SETTLER" ON THE PRONUNCIATION OF GLADIOLUS.

TO THE EDITOR:—

An old story that our grandfathers all liked, tells of two Englishmen who got into a dispute over the pronunciation of the word "neither." After a heated debate, not agreeing, they decided to leave it to a third party and, calling in the first passer-by, who proved to be an Irishman, asked him which was correct, "nee-ther" or "nigh-ther," whereupon the Irishman promptly replied, "nay-ther."

In somewhat like manner, we have a settler for the old argument on the correct pronunciation of the word, Gladiolus, to which let those who say "gla-die" as well as those who favor "glad-i-oh," pay attention! In his book, "Popular Garden Flowers," Mr. Walter P. Wright, an Englishman, who speaks as one having authority both on the pronunciation of their names and the history of the flowers embraced in his volume, has the following to say in his chapter on the Gladiolus:

"It is a little singular, perhaps, that the Gladiolus has not a popular name—that is, which is really popular, instead of one which nobody knows anything about—because the botanical name is not an easy one for the multitude to cope with, and there are as many ways of pronouncing it as there are of writing a plant label. Of course the scholar has no difficulty in the matter. He points out that the name derives quite obviously from *gladius*, a sword, in reference to the shape of the leaves; and that in consequence the pronunciation must be Glad'-io-lus, the accent being on the first syllable, the two vowels in the second being run together sharply and the third being disposed of with as quick a pressure of the tip of the tongue on the palate as the music master insists on in his interminable exercise on *lah, lah, lah*. But flower-lovers are not all word-students. They did not know that Gladiolus came from *gladius*, and

even if they had known they would not have been any nearer knowing how to pronounce it, and so they went on their own way. Some called it Gla-die'-o-lus, making four syllables, and accenting the second; others Glad-e-o'-lus, again making four syllables, but accenting the third. Popular pronunciation hovers between these two, and perhaps to the latter. Both are wrong, but the offence committed is one of those that people who know must deal gently with, rebuking the offender by no more drastic method than taking the first opportunity of repeating the name with the accent in its proper place."

From the viewpoint of euphony Mr. Wright's pronunciation does not seem to offer any improvement over either of the so-termed erroneous ways. It has, however, a logical example in the word *gladiator* which is derived from the same source, but unfortunately, the English language is not noted for being logical, and so we are still in doubt, and should hesitate to add to the perplexity of the situation by introducing a third contestant, for may it not be another case of "The Wrong Mr. Wright?"

H. G. R.

MIXING LABELS.

In the August issue of THE MODERN GLADIOLUS GROWER I have read the article on mixing labels and wish to give our method:

We use the 12" stakes, and at digging time we put the stakes in the box or bag, but in addition we write the name of the variety on the box or tray (if trays are used) with a weatherproof pencil.

When bags are used we attach a wired tree label to the outside of the bag for reference, and also another one on the inside of the sack to guard against accidental loss of the outside tag.

Since using this method we have had no trouble from mixing.

FRED GURNEY.

BOOKS ON THE IRIS.

If your correspondent does not secure a better list there are four books that may interest him. Baker's Handbook of the Irideae which gives a scientific discussion of the whole group; Lynch's Book of the Iris gives a description of most of the varieties and species with notes; Dykes' Irises is a little book about the cultivation, etc., of the different kinds, and the same author has a larger volume costing \$35 which is the last thing on the scientific side. Harrison's Iris Manual, costing a quarter, is also worth having. W. N. C.

HINTS FOR THE BEGINNER.

BY FRANK S. MORTON

PROTECTING FROM FROST—DIGGING AND CURING—SAVING BULBLETS—STORAGE.

While the blooming season is about over by this time, in an average assortment there will be many late blooming bulbs and bulbs that for some reason or another got a late start so that a good variety of blossoms may be expected at least through the early part of the month. Cool nights will delay matters some but the warm sunny days of September will keep them growing and the flowers will unfold until a good frost hits them. This may even be delayed by covering the plants at night. A newspaper wound around a plant will ward off a hard frost and when the plants are near together one newspaper will cover several. In the case of seed plants where the seed has not fully ripened, this may be done and the plants kept out of doors even after frosty nights come. And if the seed pods are not well filled out the spikes may be cut and put in water the same as a flower would be treated and the seed will go on developing and ripening in the house.

Bulb digging can be begun at any time now. On early planted stock the last of August is none too early and it is not necessary to wait until frost has killed the tops to do this. On the other hand it is much better to do it before frost comes. Digging bulbs out of cold, frosty ground is some uncomfortable, while if it is done before the ground has got so cold it is not an unpleasant operation. Where there are a few hundred or less plants, a good way to dig them is to start at the end of the row where a hole as deep as the bulbs is dug with a strong trowel. This exposes one side of the first bulbs and allows them to be pulled out with bulblets attached. One should be provided with small paper bags if the varieties are to be kept separate and if the plants have been tagged, the tag can be thrown into the bag together with the bulb and bulblets for the purpose of identification. If there are no tags, the bags should, of course, be plainly marked with a pencil. The bulbs will cure in the bags if the latter is left loosely open so the air will get inside. Later on the sorting takes place, an operation much easier done if left until the bulbs have dried. Large quantities of one kind or mixture should be spread out so that the air will have good circulation among them. The stalk should be cut half an inch or so from the bulb so that no part of the bulb itself is damaged.

Bulblets are attached to the parent bulb by root-like attachments and will adhere under ordinary handling. This is the reason why the earth should be dug away from one side as, if the bulblets get mixed with the earth, it is a difficult job to find them. The row can be easily followed along with a trowel, turning the bulbs out in order with little loss of bulblets or little danger of mixing them. Under no conditions follow out the practice of some to pull the plants up by taking hold of the top. The bulb will not always come up in such treatment and those left in the ground are generally the nicer varieties as they are not so hardy and strong as the commoner ones as a rule.

The proper way to keep a stock of blooming bulbs is to save the bulblets for planting out the next season in order to have a stock of young bulbs to replace those which get beyond blooming stages. This can be very easily done and directions for planting this kind will be given at the proper time. For the present care should be taken to allow them to cure properly and this means to keep them in a cool cellar after they have been dried off, the same as any vegetable would be dried for storing. They must not be allowed to freeze nor to be kept where it is so warm that they will dry up too much. While there are many points that a large grower needs to look after in caring for bulbs and bulblets, it is sufficient for the beginner to learn only the fact that they must be cared for in about the same manner one would care for dahlia or other tubers that are carried through the winter in storage.

Delayed Blooming.

"Misery loves company." My experience may offer a spark of comfort to some other amateur, anxious for early blooms. I planted 150 bulbs of *Chicago White* and a delicate pink which we call *Doris*, on the 27th of April, and not a bloom till the 10th of August, 103 days—unprecedented. I usually have any number the first and middle of July.

MRS. EZRA SMITH.

Note by the Editor:—The length of time from planting to blooming depends not only on weather conditions, but on other things not the least of which is the condition of the corms when planted as to dormancy. If corms are excessively dried and perfectly dormant when planted, it takes many days for them to accumulate moisture and to start the new growth, whereas, if the corms are plump with moisture, and perhaps have started sprouts, the growth is much more rapid.

The Gladiolus Society of Ohio.

THE Third Annual Flower Show of the Gladiolus Society of Ohio, held in the Assembly Rooms of the Hollenden Hotel, Cleveland, Ohio, August 13-14, 1915, was by far the best and largest in the history of the Society. Nearly one hundred and fifty entries were recorded, and yet the business was so systematized that there was very little delay or confusion, and the report of the Judges, who began their work on Saturday morning, was completed in time to be read at the afternoon Business Meeting. The quality of the exhibits was superb. There was an almost entire absence of anything like mediocre stock, and the varieties of fifteen years ago were absent. This fine quality, in part due to the unusually favorable season, was more largely owing to the great improvement that has taken place in the stocks of growers in recent years. The display as a whole was the cause of great gratification to the Society, and evoked much praise from the large number of visitors who passed through the rooms during the exhibition. The work of the associated Floral Societies of Cleveland added greatly to the attractiveness of the exhibit, their table decorations being remarkably fine. These societies, the Chamber of Commerce, the proprietors of the Hollenden, and the donors of the splendid prizes offered in the premium list, deserve the hearty thanks of the Society, and of all lovers of this grandly beautiful flower.

LIST OF AWARDS.

AMATEUR DEPARTMENT.

Class 1

By The American Gladiolus Society.

Best Display, 10 or more varieties, 6 spikes each, Silver Medal. Won by Madison Cooper, Calcium, N.Y.

Second Display, 10 or more varieties, 6 spikes each, Bronze Medal.

Class 2.

By The H. J. Alford Co.

Best Display, 10 or more varieties 6 spikes each, cash, \$5.00. Won by Madison Cooper, Calcium, N.Y.

Class 3.

By Bidwell & Fobes.

Best vase any yellow variety, 10 spikes, Bronze Medal. Won by Miss L. C. Mizer.

Class 4.

By Bidwell & Fobes.

Best vase any Pink variety, 10 spikes, Bronze Medal. Won by Madison Cooper, Calcium, N.Y.

Class 5.

By Henry Youell.

Best 6 spikes, any Named variety, cash, \$3.00. Won by Madison Cooper, Calcium, N.Y.

Second—best 6 spikes, any Named variety, cash, \$2.00. Won by R. A. Cawley.

Third—best 6 spikes, any Named variety, cash, \$1.00. Won by Miss L. C. Mizer.

PROFESSIONAL OR OPEN DEPARTMENT.

FREE FOR ALL.

Class 6.

By Charles F. Fairbanks.

Best Display of Seedlings never before exhibited, three or more varieties, three or more spikes each, cash, \$15.00. Won by A. H. Austin Co., Wayland, Ohio.

Second—three or more varieties, three or more spikes each, cash, \$7.50. Won by Jacob Thomann & Sons, Rochester, N.Y.

Third—three or more varieties, three or more spikes each, cash, \$2.50.

Class 7.

By "The Modern Gladiolus Grower."

Best Display, ten varieties, 6 or more spikes each, Silver Cup. Won by The Perkins-King Co., West Mentor, Ohio.

Second best Display, ten varieties 6 or more spikes each, 5 yr. sub. Won by R. E. Huntington, Painesville, O.

Third best Display, ten varieties 6 or more spikes each, 3 yr. sub. Won by Bidwell & Fobes, Kinsman, O.

Class 8.

By W. Atlee Burpee & Co.

Best vase any Red variety, 10 spikes, cash, \$5.00. Won by R. E. Huntington, Painesville, O.

Class 9.

By The A. H. Austin Co.

Best vase Light Red variety, 10 spikes, 25 corms Austin Seedling "Gretchen Zang." Won by Munsell & Harvey, Ashtabula, O.

Class 10.

By Matthew Crawford.

Best vase New Red variety, 6 spikes, cash, \$5.00. Won by A. H. Austin Co., Wayland, O.

Class 11.

By N. L. Crawford.

Best vase any White variety, 10 spikes, cash, \$5.00. Won by Madison Cooper, Calcium, N.Y.

Class 12.

By Jacob Thomann & Sons.

Best vase any White variety, 10 spikes, 50 corms Rochester White. Won by R. E. Huntington, Painesville, O.

Second vase any White variety, 10 spikes, 25 corms Rochester White.

Class 13.

By G. B. Babcock.

Best vase pure White variety, 10 spikes, Peony "Karl Rosenfeld," val. \$10.00. Won by Jacob Thomann & Sons, Rochester, N.Y.

Class 14.

By Munsell & Harvey.

Best vase New Yellow, 6 spikes, cash, \$5.00. Won by C. Betscher, Canal Dover, O.

Class 15.

By Joe Coleman.

Best vase any Blue variety, 10 spikes, cash, \$2.00. Won by J. F. Rychlik.

Class 16.

By The A. H. Austin Co.

Best New Yellow Seedling, without blotch, cash, \$5.00. (No award.)

Class 17.

By The Perkins-King Co.

Best vase Panama, 12 spikes, 100 corms *Panama*,
Won by J. F. Rychlik.

Class 18.

By G. B. Babcock.

Best vase of any one variety, size of spike and
bloom only to be considered. 5 New Peonies,
val. \$10.00. Won by A. H. Austin Co., Way-
land, O.

Class 19.

By G. B. Babcock.

Best New Seedling, any color, 6 spikes, New
Seedling Peony *Midnight*. Won by A. H.
Austin Co., Wayland, O.

Class 20.

By C. Betscher.

Best vase *Europa*, 10 spikes, 12 Named
Peonies, val. \$5.00. Won by E. E. Stewart,
Brooklyn, Mich.

Class 21.

By C. Betscher.

Best vase *America*, 10 spikes, 12 Named
Peonies, val. \$5.00. Won by Wayside Gar-
dens, Mentor, O.

Class 22.

By C. Betscher.

Best vase *Mrs. Francis King*, 10 spikes, 12
Named Peonies, val. \$5.00. Won by J. F.
Rychlik.

Class 23.

By C. Betscher.

Best vase *Scribe*, 10 spikes, 12 Hemerocallis,
val. \$2.50. (No entries).

Class 24.

By C. Betscher.

Best vase *Mrs. Frank Pendleton*, 10 spikes, 12
Hemerocallis, val. \$2.50. Won by R. E.
Huntington, Painesville, O.

Class 25.

By C. Betscher.

Best Display Seedlings, 100 spikes, 1 or more
each, 12 Hemerocallis, val. \$2.50. Won by
Wayside Gardens, Mentor, O.

Class 26.

By W. W. Wilmore.

Display winning largest number variety Pre-
miums, Stock from catalogue, val. \$7.50.
Won by R. E. Huntington, Painesville, O.

Class 27.

By W. W. Wilmore.

Best arranged Display, Stock from catalogue,
val. \$5.00. Won by R. E. Huntington, Paines-
ville, O.

Second best arranged Display, Stock from
catalogue, val. \$2.50. Won by Bidwell &
Fobes, Kinsman, O.

Class 28.

By R. E. Huntington.

Best collection of Red varieties, Silver Cup.
Won by Munsell & Harvey, Ashtabula, O.

Class 29.

By The Cleveland Flower-Show Committee.

Best new variety never before shown here, 12
spikes, Silver Cup, val. \$25.00. Won by R.
E. Huntington, Painesville, O.

Class 30.

By The Ohio Horticultural Society.

Best Display by any one exhibitor. Bronze
and Silver Cup, val. \$25.00. Won by A. H.
Austin Co., Wayland, O.

Class 31.

By Wilbur A. Christy, Mapleshade Gladiolus Farm.

Best New White Seedling, 6 spikes, 1 corm
Golden Measure, val. \$10.00. Won by Jacob
Thomann & Sons, Rochester, N.Y.

Class 32.

By The Society.

New Seedling, or other variety, never before
shown here, any color, grown by exhibitor,
6 spikes, (see Rule in regard to this class),
Certificate of Merit. Won by A. H. Austin
Co., Wayland, O. (three) and Jacob Thomann
& Sons, Rochester, N.Y. (one.)

Gladiolus Culture.

To the busy woman who loves flowers and yet has but little time to devote to them, the Gladiolus especially appeals. If one has but little to spend in this way, procure a dozen mixed bulbs of a reliable dealer at small cost. If one desires early blossoms they may be sprouted in the house in a box of good garden loam, then set in the bed when danger of frost is over. I have had excellent success, however, by putting the bulbs in the flower garden about the last of May (without previous sprouting) in good, rich garden loam. Plant at a depth of three inches—the colors are deeper and richer than when given only shallow culture. Keep the soil loose and reasonably moist and the display is marvelous. The bulbs increase rapidly with good care, and in a few years one has a fine collection.—ELLA F. FLANDERS in *Rural Life*.

Note by the Editor:—More specific details as to methods of sprouting Gladiolus bulbs for early bloom would be desirable and we would be glad to have information along this line from any of our readers as suggested in the July issue.

Gardening Illustrated, London, says: "Gladioli need frequent applications of water in dry weather, and as a mulching to prevent undue evaporation spread evenly over the surface of the roots a layer about two inches deep of horse-droppings. Stake the plants early in order that the flowering-spikes may be secured before they become damaged by wind. Arrange the stakes so that the top of the stake is just below the lowest flower, otherwise the blooms will become rubbed and bruised against the stake."

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THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.
Published Monthly by Madison Cooper, Calcium, New York.

Vol. II.

OCTOBER, 1915

No. 10



GLADIOLUS—GOLDEN MEASURE.

(For description see page 144.)

The Gladiolus Manual.

By W. W. WILMORE, JR.

CHAPTER VI.

Soils and Fertilizers.

SUCCESS in any line depends upon its foundation. It is necessary that we select the proper soil in which to grow the crop, in order to obtain the best results.

A technical analysis of the proper soil will not be given for two reasons, one, that many of us who have not studied this subject would not understand the different elements found in the soil and their relative positions to plant life. The other is that different soils are composed of different elements, all requiring different treatments. A proper soil for Gladioli is one that will grow a good crop of corn or potatoes. If they are lacking they may be improved by applications of fertilizers. It will be well to here remark that fertilizers should never be used except when necessary and then only in moderate quantities as great harm can arise from overdoses especially when applied to the Gladiolus.

In cases of alkali soils liming is best. Gypsum (landplaster) or air-slacked lime should be employed in proportion to its need. The action of the lime on the sodium carbonate (alkali) reacts with it producing sodium sulphate and carbonate of lime, whereby the alkali may be reduced sufficiently to render the production of good crops where otherwise plants grew sickly. Limes are also good for soils that are acid or sour which are especially noxious to plant life with few exceptions.

Heavy soils may be reduced by growing cover crops, of these the writer would recommend winter vetch or winter rye. These crops are also good for fertilizers for other soils.

We find other plants which may be grown for fertilization, of these the writer would recommend clovers, cow peas and alfalfa. We have others that are good but those mentioned are perhaps the best. These plants store great quantities of oxygen in their roots, which when decayed is set free into the soil. Stable manures are good for the reason that they contain various elements essential to plant growth. Chemical fertilizers are not good at all times as they are singular and more than one is necessary to replace that which the previous crop has taken from the soil and in order to ascertain which

are needed and how much is needed an analysis should be made.

The following chemicals are used in some localities with good results, but whether they would be advised for all soils is conjecture. One grower uses 50% sulphate of potash, 25% sulphate of ammonia, 25% nitrate of soda by weight. This mixture is used by spreading over the row mixed with well sifted soil to enable equal distribution. Others use commercial fertilizers which are prepared composing different chemical compounds, no two being alike.

Many brands of fertilizers are for sale by leading seedsmen, all of which are good for certain requirements but they are not practical for the large grower on account of the expense involved. His cheapest and best fertilizers are cattle, horse and sheep manures, the latter probably being the best, especially when well rotted and pulverized. It gives the quickest results and is stronger than the other two. As a rule from three to five tons of stable manures are required to cover one acre of ground whereas one-half the amount of sheep manure will give the same result.

Fertilizers are best plowed under in the fall. This treatment not only aids in mellowing the soil but helps in assimilation. Another advantage of fall plowing in a field which has grown a crop of Gladioli is that the bulblets which are always left so thickly in the soil, are brought to the surface where they can be destroyed by frost which, if left buried in the soil, sprout the coming season and are liable to cause mixtures.

Fall plowing is also an advantage in case of a wet spring. At this time the Gladiolus man is very busy and a few days' delay may mean a great deal to him. It is also bad for the soil to be worked in a wet condition. This leaves it lumpy and soggy which is the very thing to be avoided. All soils should be light, porous and mellow, plowed deeply and well pulverized.

Good drainage is very important. No field should have low wet spots, they should be of uniform grade allowing the water in time of rains to run off evenly. By this method one part of the field will

not be suffering from drouth while other plants are sickening from moisture.

Care should be taken to keep the soil in a loose, porous condition at all times as air must be admitted to the roots of a growing plant.

Virgin soils are as a rule the best for any crop as they are full of all the elements required by growing plants. In this case no fertilizers should be used under any circumstances. This soil, however, should be twice plowed before planting to thoroughly mix the surface soil with the under soil which is apt to be less fertile.

Soils should be plowed at least three inches deeper than the level on which the corm is placed to enable proper root action.

It is not advisable to grow a crop continually on the same plot of ground for several reasons. One is that when disease is bred into the soil it takes some time to remove it. Another is that certain insects which become troublesome abide in the soil from year to year. Another is that if the soil is inclined to be weak the growing of the same crop soon exhausts it even though fertilizers be employed.

In some cases it is necessary to grow continually on one area on account of insufficient room, but rotation of crops is always advisable.

As a summary, bear in mind the following:

Use no fresh manures; no chemical fertilizers unless you are familiar with them and their action on plant growth. The former should always be well rotted if for no other reason than to kill the weed seeds which are always so plentiful. See that fertilizers are well mixed in the soil, and the soil well pulverized. Plow deeply and rotate when possible. If you are experimenting with new soils or fertilizers, use some cheap mixture or variety to work with, as many of us have destroyed some of our very best varieties by feeding them some new fertilizer or by some other fool experiment which we then thought was an act of kindness.

(Continued next month.—Chap. VII—"Planting.")

The Gladiolus.

When any flower has had a mania all to itself, and in addition has standing to its credit two national societies and a magazine, we may safely say, without even knowing its name, that it is one which has made some stir in the floral world. This is the present position in which the

Gladiolus finds itself. Although both the early and the late varieties have for many years been inmates of our gardens, I am very much inclined to think that I may, notwithstanding its age, truthfully describe it as a coming flower. The following words are an extract from the last *Gladiolus Annual*, which is the official organ of the National Gladiolus Society of Great Britain: "It is pre-eminently a flower for the amateur gardener, and the sole reason that its culture has been so neglected until quite lately is that there has existed a quite erroneous impression that it is difficult to grow, and, secondly, that there has been no simple advice obtainable as to the best method of cultivation." This is doubtless all very true, but the points urged do not seem to be quite a sufficient cause for its not having been more grown in the past. I would like to add to the *Annual's* reason that of fashion.

Now perchance the Gladiolus is going to enjoy an eminence and popularity which have hitherto been denied it. The hard-headed, steady-going Dutch dealers got it into their heads in 1911 that such a time was coming, and from the summer of that year until the autumn of 1913 the fun was fast and furious on the wholesale bulb exchange of Haarlem. The oldest inhabitant had had no experience of anything like it, and to find anyone who had we would have had to call up from their graves the participants in the hyacinth mania of 1734-5. The following facts were told me by a prominent dealer. The whole stock of *Glory of Nordwijk* sold for 20,000 guilders, and a row of five bulbs of *Meteor Bos* (now named *Scarlet Emperor*) sold for £100. Small bulblets were freely dealt in. A hundred of these, of a variety called *Panama*, were valued at 150 guilders, and one man from Lisse bought £2,000 worth. The pale flesh-pink called *America* also obtained fabulous prices.

The two national societies are those of Britain and America. Our own came into being in the early part of 1911, and it is run by a lady, or, in other words, a lady is the secretary, namely, Mrs. G. H. Atkinson, The Flagstaff, Locksheath, Southampton. The list of members is not a long one, but it is wonderfully cosmopolitan. England, Ireland, Wales, Guernsey, the United States, France, Canada, South Africa, Egypt, Holland, and New Zealand, all figure in it, showing that many people in many lands have begun to realize the value of the Gladiolus in the garden.—JOSEPH JACOB in *British Nurseryman and Seedsman*.

Gladiolus Growing From an Australian Viewpoint.*

BY GILBERT ERREY.

EVER since THE MODERN GLADIOLUS GROWER first made its appearance I have been tempted to write, giving the views of an Australian upon the great "Gladiolus" question and asking information upon some points, as yet obscure. To introduce myself and my country to your amateur readers (no introduction is needed to your trade firms) may I begin by explaining the stage at which Australia has arrived:

It is quite beyond my power to state when Gladioli were first grown here, but amongst our family prize cards I find a first, which was won by my father on March 25th, 1886 for 3 spikes of Gladioli, and I know that my paternal relative has been sowing Gladiolus seeds annually ever since then, at least.

The introduction of blues into the genus (in cultivation) in 1899 fairly awoke my interest—*Blue Danube* from Childs and several purplish shades from Groff via another local grower; the so-called yellows, *Eldorado*, *Septire d'or* and *Isaac Buchanan* also came along about that time and great disappointments they proved—a recent introduction from Holland (*Victory*) may be included in the same obsolete class. Some of our earliest Gladioli came from the good old house of Burpee—which is remembered as the source of such fine things as Giant Oats, Golden Bantam Corn, Hickory King Field Corn, etc.; but it is only since our entrance into the trade a few years back that our closer acquaintance with Gladioli really began, with our education being advanced by the fine varieties imported from Gage, Vilmorin, Lemoine, Pfitzer, Velthuys, Black, etc. If I may judge by the scores of lists received and by the advertisements in the "GROWER," there are growers here with much more comprehensive and up-to-date collections than you have in the U. S. A., which is surprising when we consider the large number of seedling raisers you have. I frequently suspect that your growers

know as much (at least) as we do about European varieties, but that they consider it patriotic to uphold the locally raised varieties, no matter what their merit, whilst condemning a few European varieties which are perhaps faddy; and completely ignoring those European varieties which they cannot fault in any way. This U. S. A. view was very prominent in your first few issues.

I am certain that America has raised—and will raise—some splendid varieties, and very naturally I want to learn about and get all those good things, but I quite fail to become enthusiastic over *America*, *Golden King*, *Peace*, *Glory* and *Mrs. F. King*. They are splendid varieties and it will be long ere they will be discarded, but there are many equal to them. The most valued ones from your country would include *Florence*, *Lavendula* and *Dawn* (Groffs). I have not Tracy's variety. The early flowering section—so well dealt with in your issue of October last—are as yet scarcely known in our gardens but as they grow like grass and trade growers are enlarging their collection quickly, it will not be long ere they take their proper place. Surely Mr. Wilmore is wrong in stating that *G. Atrovioleaceus* is the earliest of the early section to bloom; with me *G. Tristis* flowers with the later Daffodils and is closely followed by the dwarf *G. Brevifolius* and *G. Communis*. Mr. Wilmore also asserts that the other beautiful species are valueless for forcing but surely he cannot have tried *G. Insignis* and *G. Cardinalis*—or that doubtful species *G. ne plus Ultra*. *Insignis* I think superior to any *Nanus* variety—its blossoms are over five inches across and very little inferior to the well known *Princeps* in coloring; also it is not uncommon to get 35 flowers from each shoot and as is the case with *G. Nanus*, each bulb throws several shoots. I grow *Insignis* for market and in a normal season obtain \$4.80 per 1000 spikes as against \$2.40 for *The Bride* variety of *G. Colvillei*. I have obtained as low as \$1.10 per 1000 for *The Bride* but never under \$3.60 for *Insignis*.

An early discussion on good printing greatly interested me—with the admirable facilities offered by the McFarland Publicity Service, U. S. A. growers have an advantage over those in most other countries; the McFarland finish stands alone amongst our 150 or so annually received lists, particularly so where color work is concerned.

* This article comes to us from an experienced Australian grower, and as the heading of the article indicates, it is from a strictly Australian viewpoint. Possibly the buying public and the Gladiolus trade in Australia are accustomed to and educated to a different standard of excellence in Gladioli than we have in America. Many of the varieties which Mr. Errey mentions are not at all well known here, never having been introduced extensively and his recommendations of such varieties are interesting. The climate and cultural conditions of Australia also might operate to produce different results with the different varieties than would be obtained in America.

Somewhere in your pages it is mentioned that the variety *Faust* is a Groff seedling—we have had the same thing for 15 years at least under the name of *Abbe Raccourt* (Lemoine). *Golden West* and *Pacha* are different in the bulb but the flowers are indistinguishable from each other. I should say that this is a genuine case of two seedlings very much resembling each other. Some leading growers locally also assert that *Golden King* is *Juno*, which has been known here for many years. I have never actually compared the two blooms but do not know of any difference between them.

In your May 1915 issue *G. Gelria* is given as a hybrid strain—we have seen several thousand blooms of *Gelrias* but would put them down as ordinary seedlings from selected early flowering *Lemoinei* varieties; also your pages mentioned that *G. Præcox* were merely seedlings of *Lemoinei*—if this be correct then they are indeed very poor seedlings and not worth growing by anyone. Personally I would not sell them even as common mixed.

Mr. B. F. White (p. 73 of 1914 vol.) states that *Gandavensis* has lost its old-time lead in the classes of Gladioli. I venture to assert that no Australian would agree with him as it is that type as exemplified by *Schwaben*, *Lavendula* and *Europa* which scores on our show benches. If I may vote for the type of illustration to be used in the THE MODERN GLADIOLUS GROWER let it be a single spike only—who can tell the form of *Minnesota* as illustrated in the April issue? Three spikes are much nicer than a massed vase.

The suggestion that the ten best Gladioli be selected by growers will have been acted upon before this reaches you—I have often attempted to select twenty-five as the best for show purposes but have never yet satisfied even myself. To select only ten would be a worse task. I should start with *Prince of Wales*, *Schwaben*, *Lavendula Major* (a selection from Groff's *Lavendula*) *Europa* and *Glory of Noordwijk* and then would be faced with over fifty sorts fighting for the other five places. *Edward VII*, *Amberite*, *Saphir*, *Contrast*, *Orby*, *Electra*, *Badenia*, *Armaguac*, *M. Brunelet*, *La Gloire*, *Pendleton*, *Bleriot*, *Loveliness*, *Salmon King*, and Mrs. F. Field would require consideration.

Is Europa Weak?

Last month there was a little article entitled "*Europa* is Weak." We hoped that this would bring out further suggestions along this line. Certainly those who are growing *Europa* may have something

useful to say about their experience. The article in last month's paper was written some weeks ago, and since then the foliage of *Europa* in our garden has made steady growth and some very excellent bloom has also been cut. Our deduction is that *Europa* needs an exceptionally rich soil for best development and that in a poor to ordinary soil that its development will be defective. Possibly a very rich soil might lead to various diseases but then again it might make so strong a growth as to resist disease. Can any one give us further information and the benefit of their experience along this line?

May it not be a fact that other varieties as well as *Europa* by special treatment and handling would give good results? Certainly some varieties thrive better in a medium or poor soil than others and if this is so, why should not the ones which do not do well in such a soil perform much better should they be well fed? If so excellent a variety as *Europa* can be grown even by excessive feeding it is certainly worth the extra attention.

A Superior Season for Gladioli.

Weather conditions have been such that the securing of fine bloom this year has been comparatively easy. At all the flower shows the displays have been truly magnificent and never before have so superior exhibitions been possible. Furthermore, the shows which have taken place have drawn together collections of improved varieties which have never before been equaled. The season of 1915 is certainly a Gladiolus year in many different ways.

The low prices prevailing have induced a comparatively large planting not only among commercial growers, but among the smaller or amateur growers. It is probable that low prices will prevail during the coming season and, therefore, all interested in the trade should "put their shoulder to the wheel" to see if the wonderful qualities of the Gladiolus cannot be introduced to a much wider range of customers. A large proportion of the people who are introduced to the merits of the Gladiolus as a garden flower and as a cut flower become very enthusiastic in its praise and, therefore, the general introduction of our favorite flower is only a question of time. Put in a little extra effort especially to introduce it to new growers and the Gladiolus within a few years will become the general favorite with all flower lovers.

MRS. AUSTIN'S TALKS FOR AMATEURS.

GLADIOLUS DIGGING IN OCTOBER.

Out in the open as the sun comes peeping over the horizon, and the world is silvered with dew, a walk in the Gladiolus field is one of the joys of life. The silken spider webs studded with diamonds would bring tears of envy to the eyes of the lace makers, or those who form the intricate patterns of Irish crochet.

The fresh, crisp air fans our faces and

know the place as Whippoorwill Hill, and that the whippoorwills sing there at night.

We can catch a glimpse of the creek flowing quietly through the pastures and bordered by the woodland, carrying its autumn quota of leaves fallen from the trees along its banks. But these are only hints of the many Nature pictures before us, each in ever varying and endless change, unequaled by the finest in Mrs. Multimillionaire's Gallery of Art.

With all this beauty around us, October Gladiolus digging is really glorious. The bulblets are about harvested, for September is the best time for that work as it is

less labor to get the small bulbs from the ground when the tops are green and do not break off easily. They should be broken off as fast as they are dug and the small bulbs spread on trays in the sun if possible. A few days of sunlight will dry them so the soil can be easily sifted out. Place them in an $\frac{1}{8}$ inch mesh wire sorter and rub the soil out over a basket as illustrated.

The trays in which the bulbs are cured may also be seen. One shows the three cornered piece of wood that is tacked to the

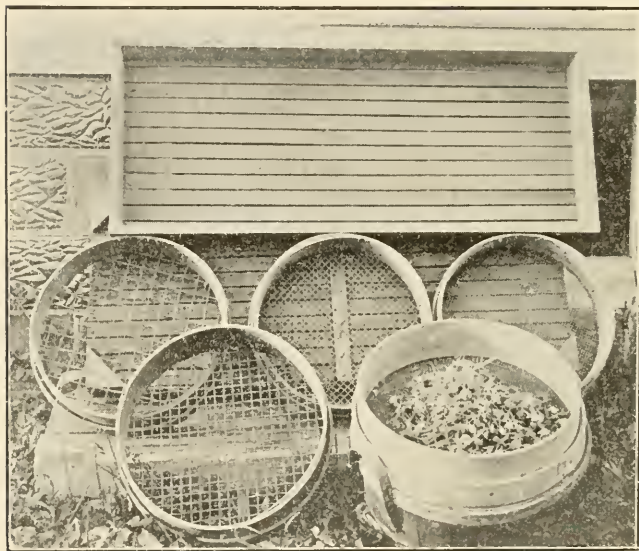
bottom of them for air space when stacked. Made of light wood $\frac{7}{8}$ inch stuff, 48 inches long, 18 inches wide, 4 inches deep, they are light and easy to handle, which is an important point.

MRS. A. H. AUSTIN.

This is what one of our correspondents says about Bound Volume I:

"Have spent many interesting hours with Bound Volume I, and would not care to part with it for a good deal if I could not get another."

Those who have not a complete file of THE MODERN GLADIOLUS GROWER can still secure this volume for \$1.00 postage prepaid. Nowhere is there so much practical information and useful facts on the Gladiolus as is contained in the back files of THE MODERN GLADIOLUS GROWER. Bound volumes will be eagerly sought in years to come.



fills our lungs with ozone, and it comes to us so freely that it seems strange to know that in some of the great buildings of our large cities that the air in the various rooms has gone through a purifying process, and on one hot August day down in a basement forty feet below the street level, we were allowed a peep at the interesting process of washing air, which resembled a driving rain storm.

Do we not have many interesting things and sights at home which we perhaps only half appreciate? We cannot all have vacations at the lakes or in the mountains, but perhaps we may find increased pleasure in our own surroundings. Those hills and ledges over there clothed with heavy foliaged trees, now brilliant with the tints of autumn, and with a blue haze softly veiling them, are as beautiful as the Berkshires, but we

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Vol. II.

October, 1915

No. 10

Amateur or Professional?

It is probable that those who framed the resolution regarding the status of an amateur, presented and adopted at the annual meeting of the American Gladiolus Society, did not realize what a ridiculous position it would put the society in to have such a report go out to the public. It is very plain to see that President Fairbanks has aimed to bring about a peaceful settlement of the vexed question and it is also very evident that he has listened to bad advice. The narrow and picayunish stand taken by one or two members has placed the society in a very unenviable light, and the sad thing is that a whole roomful of live, energetic and capable business men who would resent at once any attempt to introduce such methods into their own business, have sat and allowed such a thing to be done.

A man can sell all the bulbs he wants to and still be an amateur if he allows the middleman to get part of the profit of selling. It is well known that some amateurs plant bulbs well up into the hundred thousands and are profitable customers to many dealers. If their stock should be unloaded on the market at some point when they either get sick of the hobby or get overstocked in any one variety, it

would do damage to some dealer who does nothing in the way of working up original stock or who is really anything more than an ordinary commission merchant, buying and selling the same as one would cabbage, unless he had a chance to get a slice of the pie. So such dealers are allowed to go into the meetings of the Gladiolus Society and by their complaining induce the formulating of such a resolution while a whole roomful of men who are safely entrenched behind a bulwark of original work which cannot be troubled much by what any amateur does, sit and allow such ideas to go out as the unanimous sentiment of a great society with a worldwide membership.

It is a shame that the real sentiments of such men as make up the larger part of the society could not be voiced in this matter and a vote taken that would be of value to the horticultural world. Instead we go on record as saying that as long as the business of buying and selling bulbs is not interfered with anyone can do most anything. Such members of the society whom I have met personally have individually expressed themselves very generally in favor of a liberal policy. One or two have been very outspoken on the other side and have plainly stated to me that "it makes no odds what is done as

long as we make them continue to buy bulbs."

Such a course is not a dignified course and is not the course of wise business men. The Gladiolus Society should be a benefit to all legitimate dealers and breeders, but if it is subordinated to them in the future as it has been in the past it is easy to see what will very shortly become of it.

I do not wish to go on record as a critic of President Fairbanks for introducing the resolution. I consider his work as worthy of great credit and that no matter how many bulbs men like him have to dispose of, they are true amateurs and love the Gladiolus as a hobby and are a help to us lesser lights. But I do think it is a shame that it was necessary for him to present such a resolution and then, with no objection, to have to call it adopted. He and the rest of us should have a right to sell bulbs or flowers under such conditions as would be compatible with the fact that we are not in the business for profit, but, on the other hand, if he or any of the rest of us go into it to such an extent as to become a serious factor in the trade, then the Society should have the right to bar us out, even if we do sell through a middleman.

F. S. MORTON.

Removing Tops from Gladiolus Corms at Digging Time.

There seems to be no standard of procedure in connection with the removal of the tops from Gladioli when digging the corms for curing in the fall. Some recommend that the tops should be left on a few days while others advocate prompt removal of tops as soon as dug. Still others cut the tops three or four inches from the corm. We believe that the prompt cutting off of the tops closely to the corm at digging time is the correct way and it is also far more practicable. Commercial growers, of course, find it easier to lift the corms by the tops and haul them to some central place for cutting, but the amateur or small grower

will find it fully as convenient to lift the corms by the tops and cut them with shears (pruning shears preferred) allowing the corms to drop into a box or tray. The tops may be left on the ground to be gathered at a later time or ploughed under as may be considered best. The practice of "pulling" the tops off the corms is so barbarous as to be hardly worth considering. This not only is an unnatural way of proceeding but it is hard work and leaves the corms in a very unsightly condition.

It has been argued that leaving the tops on the corm for a few days results in the sap going into the corm and thus adding strength and vitality to it. We believe that if the top is left on the corm, capillary attraction results in taking the moisture out of the corm and into the top causing a very rapid and undue drying out or shrivelling of the corm which cannot but weaken its strength and vitality. It is, in fact, far better to cure or dry the corms by natural evaporation through the husks than by drying them out through capillarity into the tops by leaving the tops attached to the corms after digging. A rather slow curing is certainly far better than a rapid curing and, therefore, the loss of moisture from the corm by the soaking action of top or capillarity is certainly not correct.

Owing to a diversity of opinion on this matter we have covered it in some detail as above, but we have no desire to call the matter settled and would be glad to hear from others along this line.

MADISON COOPER.

In making photographs of Gladiolus flowers care should be taken that the flower spike is a representative one. Photographs made from flowers grown from small corms or bulblets are of very little value to illustrate varieties. First class spikes only should be used for photographs. The inexperienced grower is likely to use most any subject for his photographic effort where only the best should be employed.

WAYSIDE RAMBLINGS.

THE "TEN BEST" GLADIOLI.

To advance a proposition upon which no two persons can agree can hardly be anything but time wasted and to have the opinion of one or more accepted by those not posted, must result in harm to many.

Submit the proposition of naming the best ten varieties of Gladioli to fifty growers and enthusiasts and it would be dollars to doughnuts that there would be a wide variance in all the lists. The beginner might ask why this should be. In the first place there are no less than four hundred good named sorts on the market and to select the best ten would be beyond the ordinary mortal; secondly, it is simply a matter of judgment, and to illustrate this point the writer was making an exhibition and a gentleman approached a vase of dark muddy sort, not seeing in the least the radiant beauty of the others, and exclaimed, "What wonderful oriental coloring, what an effect for a den furnished in Turkish trappings!" This variety did look something like an oriental rug and likely my finer senses were not sufficiently developed to appreciate it.

We say to a beginner—these are the "best ten"—he buys. Following year the "Glad" catalogs roll in and Beginner glances through the pages of over a hundred sorts. It is tossed in the waste basket. Why should he buy more? He already has the "best ten." Grower and Beginner both suffer. Grower has gone to the expense of a book when a four page folder would have expounded the glories of the "best ten." Beginner misses the wonderful treasure house that the ninety and nine would furnish.

The "best ten" is an impossibility for the reason that the grower keeps up-to-date and adds one or more new sorts each year that supersede and are superior to already standard varieties. Seedlings are reaching a high state of development and the gorgeous new things that are being increased as fast as possible to make glad a waiting public, makes the "best ten" an impossibility.

Could I select the "best ten" pink sorts? Surely that's easy. Here goes: *America*, *Panama*. Then there's Child's *Wildrose* and Wm. Falconer. We come to Kunderd's *Mrs. Pendleton* and *Myrtle*. Mr. Christy has given us *Mapleshade*. How about Tracy's *Dawn* and Mrs. Austin's *Rose Wells*? From across the water comes Hopman's *Pink Perfection*. Wright is introducing *Rose Bud*. Still I am not half

through with the good pinks. The task is beyond me. Good night!

JOE COLEMAN.

CUTWORMS.

In a recent number of THE MODERN GLADIOLUS GROWER, the life history of the cutworm was called for; also, remedies for its extermination. While there are a number of so-called cutworms, they are all larvae of certain species of Noctuids, or owlet moths, a family deriving its name both from its nocturnal habits and from the brightness of the eyes of the moths in the darkness of night. The family is a large one, and embraces such destructive pests as the army-worm, the boll-worm, the cotton-worm, the hop-vine *Hypena* and others.

The female cutworm moth lays her eggs in summer, which soon hatch into larvae. Being quite small the first season they do little apparent damage as they feed upon the fine roots and tender blades of an abundant midsummer vegetation. As cold weather approaches, they seek the ground, where they dormant pass the winter. When they emerge in the spring, having grown larger, with appetites keeping pace with their growth, and as vegetation at this season is scarcer and smaller, their ravages attract attention, especially so because of their wasteful habit of cutting the plants off at the ground, thus destroying much more than they consume as food. They return to the earth again when full grown, making oval-shaped chambers in which they pass through the pupa stage, and emerge finally during June, July and August as full sized moths, thus completing their life cycle.

Getting rid of them seems to be a real problem. The use of lime and ashes was suggested respectively by two contributors to the MODERN GLADIOLUS GROWER for September, 1914, as preventive measures in preparing the ground for Gladiolus growing. Cabbage growers sometimes protect their young plants by wrapping them with hickory leaves, or put tar-paper collars around them, setting these deep enough to prevent their burrowing under. But this would be a too tedious operation for those who grow Gladioli on a large scale. The placing of poisoned bait, such as an arsenically poisoned bran-mash, is recommended as about the most successful method known of exterminating them where they are abundant, but the making of numerous deep, vertical holes in the soil with a thick cane or broom-handle is advised as a simple means of trapping them. They work entirely at night, and

will seek such holes at the approach of daylight in which to hide, and if they are well made, the sides will be smooth and they cannot crawl out of them.

Notwithstanding the numerous valuable suggestions that are offered, it is generally believed that no thoroughly effective remedy against their ravages has as yet been discovered. H. G. READING.

DEFINING THE AMATEUR!

The correspondence appearing in your columns under the above heading, appears to me to have reached the stage when the heading should be changed to "How best to class growers at exhibitions." The primary object of exhibitions is to encourage or increase the number of growers. Therefore the small grower must be considered; otherwise instead of becoming a large grower he either turns his attention to something else, or ceases to exhibit. It has occurred to me that the Rose Classes in England might give some suggestions.

I have before me the schedule of the Croydon Flower Show held on the 23rd June last. In it, there are six classes open to amateurs "only" irrespective of the number of plants they grow. One class open only to growers of fewer than 2000 plants of varieties in the N'R'S., list of exhibition roses. Two classes open only to growers of fewer than 1000 plants, and two classes open only to growers of fewer than 500 plants.

The classes open to "all England" are described as "Nurserymen's Classes."

Yet another way by which the difficulty might be met; adopt or follow the lines of the London Daffodil Show. Divide the exhibitors into three sections: those that can put up 48 distinct varieties—section 1: those that can put up 24 distinct varieties—section 2: those that can put up 12 distinct varieties section 3. The other classes in each section differing only in the number of objects asked for.

G. C.

REMEDY FOR CUTWORMS.

A remedy which I have found excellent for preventing cutworms damaging dahlias, tomatoes and other plants is as follows: Use lump lime slacked with water, and dilute to the consistency of milk. This can be poured around the plant. I tried it on some plants and left others without it and those not having the lime were cut while those limed were untouched. This is worth trying and I hope it will prove as helpful to other growers.

HERMAN KIRSCHT.

TIME FROM PLANTING TO BLOOMING.

Here is the record of my various varieties in Southern Connecticut from planting to blooming time in 1914. It may interest somebody.

	Planted	Bloomed	Days
A. W. Clifford.....	May 21	Aug. 8	79
Ave Marie.....	May 3	July 13	71
Angell.....	May 3	Aug. 8	97
America.....	May 3	July 27	85
Augusta.....	May 3	Aug. 8	97
Attraction.....	Apr. 18	Aug. 5	109
Brilliant.....	May 3	July 23	81
Baron Jos. Hulot.....	May 2	July 28	87
Brenchleyensis.....	May 3	July 20	78
Chicago White.....	May 11	July 28	78
Canary Bird.....	Apr. 18	Aug. 5	109
Cardinal.....	May 3	July 22	80
Columbia.....	May 3	Aug. 14	103
Dawn (Tracy).....	Apr. 18	Aug. 5	109
Eugene Scribe.....	May 3	Aug. 14	107
Faust.....	May 3	July 24	82
Golden West.....	May 11	Aug. 8	89
Grenadier.....	May 3	July 29	87
Golden King.....	May 10	Aug. 8	90
Harvard.....	Apr. 18	July 28	101
Hollandia.....	May 3	Aug. 8	101
Isaac Buchanan.....	May 3	Aug. 7	100
Independence.....	May 3	Aug. 16	105
Klondyke.....	May 3	July 30	88
Kunderdi Glory.....	Apr. 18	July 30	103
La Camelia.....	May 3	July 20	78
Lemoines			
Butterflies.....	May 3	July 23	81
Mephistopheles.....	May 3	Aug. 8	101
May.....	Apr. 18	Aug. 10	112
Mrs. H. W. Beecher.....	May 3	Aug. 8	101
Mrs. F. King.....	May 3	Aug. 10	103
Niagara.....	May 11	Aug. 17	98
Octoroon.....	May 3	Aug. 14	107
Princes.....	May 3	Aug. 8	101
Peacock.....	May 3	July 28	86
Peace.....	May 3	Aug. 4	97
Pacha.....	May 3	Aug. 1	89
Primulinus.....	May 3	July 20	78
Pink Beauty.....	May 3	July 4	62
Rosella.....	Apr. 18	Aug. 5	109
Scarsdale.....	Apr. 18	July 3	104
Sulphur King.....	May 3	Aug. 3	90
Sulphur Queen.....	May 3	Aug. 14	101
Taconic.....	May 3	Aug. 10	97

W. E. DAVIS, JR.

DO VARIETIES RUN OUT?

I note the article under this head by Willard N. Clute in August issue and would be glad to know the experience of others in this respect.

I note a decided tendency to change both form and color of Dahlia blooms from year to year where nothing but the root method of propagation is used and while my experience with the Gladiolus is limited, I yet wonder why, if there be the very decided difference that I have noted in Dahlia culture, Gladioli may not change in the same manner. Would like to know the experience of other of your readers with either of these in order to determine if the change I have noted in Dahlias is usual or if I have simply stumbled on an erratic strain in my Dahlia experience.

JAMES E. CHURCH.

HINTS FOR THE BEGINNER.

BY FRANK S. MORTON

DIGGING, STORING AND CURING GLADIOLUS
CORMS—OTHER FALL SUGGESTIONS.

October finds the Gladiolus season at an end with the exception of scattering blooms from late planted varieties that have escaped early frosts. Late blooms from varieties so far on the market are not as satisfactory as those that come at normal times but there are a few varieties that will do very well late. It is likely that before many years the breeders will have varieties that will bloom well up to October if the season is favorable regarding frost. Under ordinary conditions, however, the amateur should have his bulbs all dug and in the house by this time.

The cleaning of the bulbs is a job for late fall and early winter, and by that time the old bulbs and roots will be so dried that they will separate from the new bulb without much effort. This work can be done any time, of course, only it is harder when the bulb is freshly dug as the roots and old bulb cling tenaciously to the new bulb. However, whichever time the work is done, care must be taken that the bulbs have air circulating around them until well cured or the moisture of the roots, old and new bulbs, with the earth clinging to them, will cause rot and destroy the bulbs. But they will cure all right in the paper bags if the bags are set where the air can get to all sides. Large quantities of bulbs are most successfully stored in shallow trays, some times with wire or slat bottoms to admit of the passage of air. If the amateur will imitate this treatment with the best means he has at hand, the bulbs will surely cure well.

Storing them when all cleaned is a problem that one who has many bulbs has to contend with. Some say the place should be dry and some say the moisture of a cellar is necessary. But with a few bulbs there will be little trouble if they are kept from freezing and are not where it is too wet and cold or too hot and dry.

In sorting over the bulbs some will be found large and fair while others will be small and weak looking. A bulb that has thrown out a large flower during the season may be smaller than the one planted but this is all right as the plant has not been able to do both jobs of blooming and making a bulb to the fullest extent. In many cases where many bulbs are grown something arrests growth

and a small bulb will be found on top of the old one, very much smaller than the one planted. If this is a rare variety it should be kept carefully until next season when if given extra care it will probably grow large again. If the variety is common it is hardly worth the trouble. But many interesting experiments can be carried on with bulbs of this description, with surprising results often.

It will be found also that a good proportion of the bulbs have grown blind. This means that a large, healthy plant has been sent up but no flower spike has resulted. It seems to be the habit of many varieties to do this, sometimes every other year and sometimes with no regularity. But if one sees a vigorous plant with extra long leaves of good color and substance and many times as tall as one with a spike, but in this case with the spike lacking, it is pretty safe to expect an extra large bulb which the next year will give a good bloom.

After digging the bulbs the plot should be cleared up of dead tops and other litter, as by so doing many eggs of injurious insects may be disposed of. If possible select another spot for the Gladiolus another year as, while this is not actually necessary, it is better to rotate the crops with something else. Spade up a new plot of grass land if possible and plant something else in the Gladiolus plot of the past season. Then one will be most sure of good blooms and bulbs right along.

To the Gladiolus.

By F. J. CRANE.

Prismatic gleams that glorify the bow,
Faithful as liege-men to their country's call,
Adorn thy spike and there in beauty grow
Like flaunting banners o'er a castle wall.

Moistened by dews of drowsy summer night,
Swayed by the rising wind that greets the sun,
Resplendent as some courtly armored knight
Who decorations wore for honors won.

Wondrous that power of hidden alchemy,
When sunbeams rooted to our mother earth
True to the course of nature, beautify
Triumphant over plants of lesser worth.

Grand, glorious flower! Thy secret, tell me,
An humble suppliant on bended knee—
Did He who made the deadly Upas tree
In penance for Infinite spleen, make thee?

There is no better way to popularize the Gladiolus than to show bloom of some of the modern varieties to people who are not familiar with the possibilities of this beautiful flower. Many people remember the "old fashioned red," and do not know what the modern Gladiolus means.

A Little Gladiolus Diplomacy.

By HARMON W. MARSH.

There are two kinds of persistence, one of which arouses direct antagonism and another which is so subtle and unassuming in its encroachments that it is likely to accomplish its ends before the fact is realized.

Three years ago the "The-Man-of-the-House" planted twenty-five mixed Gladiolus corms in the back yard. They were not choice mixture either, and "The Little Lady" didn't admire them a little bit, but he thought he saw possibilities. So, the next season he quietly ordered a dozen each of two named varieties, which were planted, with the increase from the first year, in an obscure corner. If they attracted the attention of "The Little Lady," she said nothing.

This season "The Little Lady" was deep in housekeeping affairs when the garden was made, so "The Man-of-the-House" took his convictions, courage, and a fine lot of special mixture corms in his two hands and planted two double rows of Gladioli across the garden, just even with the living room windows.

After they were well up, "The Little Lady" spied the green blades and entered a mild protest, but was softly answered—"It is too bad that you don't like them there, but it will spoil them to move them now."

So they were well cared for and thrived and in July they put forth a gorgeous lot of vari-colored blooms—right in plain sight from the living room windows. It was observed for a few days that "The Little Lady" seemed uneasy, but if "The-Man-of-the-House" suspected the cause he kept discreetly silent.

Some callers remarked about the lovely colors and after they left, "The Little Lady" put on her rubbers and went out to make a closer inspection. "The-Man-of-the-House" was intent on a book when she returned. She made him put it down and listen to an animated talk about glorious colors and combinations, about maroons and scarlets and purples and yellows and one particular pink that had a butterfly painted in each flower.

That evening "The-Man-of-the-House" was using his pencil on an illustrated Gladiolus catalog, while "The Little Lady" was apparently immersed in a magazine, though an occasional furtive glance was cast in his direction. When he arose to put away the catalog, she asked for it and studied it for half an hour. Then she inquired, "Have you any of these named varieties?"

"About a dozen," was the reply, "Just a few of each, planted around in the borders, in clumps. You'll find pencil checks opposite those we have—some of the cheapest, for a try-out."

Silence ensued for another half hour and then "The Little Lady" issued her fiat. "Well, next year we will have *War* and *Blue Jay* and *London* and *Silver Star*."

And now "The-Man-of-the-House" is wondering if it is not possible to do things too well sometimes, and is trying to figure out how the garden appropriation can be increased without putting a crimp in the Prince Albert allowance.

Golden Measure.

(Subject of illustration on front cover.)

This new Gladiolus is the realization of what has long been thought unattainable—the production of a Pure Yellow Gladiolus of the *Gandavensis* type. It was originated in 1905 by the famous English growers, Messrs. Kelway & Sons, and though only a few years before the public, has gained numerous prizes, among them the following: 1908, Award of Merit of the Royal Horticultural Society; 1912, The Premier Award of The National Gladiolus Society as the *best Yellow Gladiolus in Commerce*; 1912, Silver Cup, (first prize) of the National Gladiolus Society. First Class Diploma, North of England Horticultural Society; 1913, First Class Certificate of the National Gladiolus Society. It has hardly become known in the United States as yet, but when introduced will no doubt become very popular. It is a strong and vigorous grower, equal in size to the largest varieties, with a strong, straight spike of from 16 to 20 flowers, which are a pure golden yellow, and have as yet been perfectly free from any markings of any kind. The flower is of great substance, wide petals, round and well open, and attracts attention among all others, even at a distance. It forms a very large corm, and is quite fairly prolific. Growers who have been seeking the tint they desired by making the disappointing *Primulinus* crosses, may find in *Golden Measure* all they have hoped for. It is very similar to *America* in its habit of growth, but even stronger.

When the rose has had her day, and shed;
The sweet peas straggled off to bed,
Then wakes the gay, but not frivolous
Bold and aggressive Gladiolus.

Her sword leaves, long, two-edged and sharp,
Straight as a string, without a warp,
The flower spikes tall of stately mien,
In beauty's realm a reigning queen.

—Alexander MacLellan.

American Gladiolus Society.

Annual Show and Meeting at Newport, R. I.

IT is probable that the annual flower show of the American Gladiolus Society held at Newport, R. I., on Aug. 19-20, 1915, staged the finest collection of Gladioli that were ever gathered together in one place. Over 50,000 spikes were shown and many more were not placed owing to lack of vases and space. Weather conditions had been almost ideal for extraordinarily well developed bloom and the show was, therefore, a magnificent one, and all agreed that they had never before seen anything as fine.

The groups staged by President Fairbanks, Theodore A. Havemeyer, John Lewis Childs, B. H. Tracy, Arthur Cowee, William Sim and others contained many striking novelties. The seedlings exhibited by L. Merton Gage, John Lewis Childs, John Scheepers & Co., J. Thomann & Son, and S. E. Spencer were pronounced acquisitions. The members of the committee of the Newport Horticultural Society and the Garden Association of Newport, deserve the highest praise for their labors in decorating the hall and for many other services rendered.

At the annual meeting held in the evening of August 19th the following officers were elected for two years: President, Charles F. Fairbanks; Vice President, T. A. Havemeyer; Secretary, H. Youell; Treasurer, A. E. Kunderd. Executive Committee: M. Chamberlain, T. A. Havemeyer, Arthur Cowee.

The by-laws were amended so that in the future the shows will not be held in conjunction with the convention of the S. A. F. and O. H.

In the amateur and private gardeners' classes practically the same exhibitors as already mentioned won prizes, namely, Messrs. Fairbanks, Havemeyer, Madison Cooper, together with Miss Fanny Foster, Newport R. I., and L. M. Fuller, Rock, Massachusetts.

The prizes in this section were donated by many of the leading commercial firms, such as Stumpp & Walter Co., John Lewis Childs, H. A. Dreer, Inc., Chamberlain & Co., Jacob Thomann & Sons (Rochester), A. E. Kunderd, Vaughan's Seed Store, Bidwell & Fobes, C. Betscher, J. M. Thorburn & Co., B. Hammond Tracy, H. Youell, and Munsell & Harvey.

The judges made the following awards: First-class certificates of merit to L. Merton Gage for *Mrs. Norton*; John Lewis

Childs for *Newport*; John Scheepers & Co. for yellow seedling No. 3/7229.

Honorable mention to Chamberlain & Co. for general display; A. E. Kunderd for *Primulinus* hybrids; W. Atlee Burpee & Co. for *Fordhook* hybrids; Brookland Gardens for seedlings; Knight & Struck Co. for general display; R. W. Swett, Saxonville, Mass., for display; T. E. Cogger, Melrose, Mass., for seedlings; T. A. Havemeyer for general display.

Vote of thanks to Munsell & Harvey, Ashtabula, O., for seedlings; H. E. Meader, Dover, N. H., for general display; A. H. Austin & Co., Wayland, O., for group; and to C. M. Bughob, a cultural certificate for *Europa*.

The Newport Horticultural Society awarded a Silver Medal to Charles F. Fairbanks for his grand display.

Prof. Massey of Cornell University had an interesting exhibit of cultures and various diseases of Gladioli. This in itself was worth going a long distance to see.

The judges were Jas. Wheeler, Natick, Mass.; J. Zeestraten, Saxonville, Mass.; W. Andrews, Sterling, Mass.; Bruce Butters, James Robinson, Andrew S. Meikle, all of Newport.

SCHEDULE OF PRIZES.

OPEN CLASS.

GLADIOLUS BLOOMS.

T. A. HAVEMEYER, New York.

1st 2nd

No. 1—\$6.00 \$4.00—Best 6 spikes any White Variety. 1st won by Charles F. Fairbanks, Boston, Mass.; 2nd won by T. A. Havemeyer, Glen Head, Long Island.

No. 2—\$6.00 \$4.00—Best 6 spikes any Pink or shades of Pink. 1st won by Charles F. Fairbanks, Boston, Mass.; 2nd won by R. W. Swett, Saxonville, Mass.

No. 3—\$6.00 \$4.00—Best 6 spikes any Yellow. 1st won by A. E. Griffon; 2nd won by T. A. Havemeyer, Glen Head, L. I.

No. 4—\$6.00 \$4.00—Best 6 spikes Blue or Lavender. 1st won by Charles F. Fairbanks, Boston, Mass.; 2nd won by T. A. Havemeyer, Glen Head, Long Island.

No. 5—\$6.00 \$4.00—Best 6 spikes Red or shades of Red. 1st won by R. W. Swett, Saxonville, Mass.; 2nd won by Charles F. Fairbanks, Boston, Mass.

No. 6—\$6.00 \$4.00—Best six spikes any other color. 1st won by B. H. Tracy, Wenham, Mass.; 2nd won by Madison Cooper, Calcium, N. Y.

W. ATLEE BURPEE & Co., Philadelphia, Pa.

No. 7—\$10.00—Best collection 10 varieties 6 spikes of each, won by B. H. Tracy, Wenham, Mass.

JACOB THOMANN & SONS, Rochester, N.Y.

No. 8—\$5.00—Best vase of White or light seedling, new. Won by Clark W. Brown, Ashland, Mass.

W. W. WILMORE, Jr., Wheatridge, Colo.

No. 9—\$5.00—Best 6 spikes *Golden West*. Won by Clark W. Brown, Ashland, Mass.

CLARK W. BROWN, Ashland, Mass.

No. 10—\$5.00—Best 3 spikes *Mongolian*.
No. 11—5.00—Best 3 spikes A. W. Clifford. Won by Madison Cooper, Calcium, N.Y.

A. H. AUSTIN & Co., Wayland, Ohio.

No. 12—\$5.00—Best 6 spikes *White Bertrex*.

H. W. KOERNER, Station B, R. F. D. 6, Milwaukee, Wis.

No. 13—\$5.00—Best 12 spikes *American Wonder*.
No. 14—5.00—Best 12 spikes *Twilight*.
No. 15—5.00—Best 6 spikes *Blue King*.

E. E. STEWART, Brooklyn, Mich.

1st 2nd
No. 16—\$3.00 \$2.00—Best 12 spikes *Black Beauty*. Won by Madison Cooper, Calcium, N.Y.
No. 17—\$3.00 \$2.00—Best 12 spikes *Lucille*. Won by Madison Cooper, Calcium, N.Y.
No. 18—\$3.00 \$2.00—Best 12 spikes *Minneapolis*.
No. 19—\$3.00 \$2.00—Best 12 spikes *Sulphur Queen*.
No. 20—\$3.00 \$2.00—Best 12 spikes *Michigan*. Won by Madison Cooper, Calcium, N.Y.

H. A. DREER, Chestnut St., Philadelphia, Pa.

No. 21—\$5.00 first; \$2.50 second—Best vase, 5 spikes each *Heliotrope* and *Sulphur King*.

C. BETSCHER, Canal Dover, Ohio.

No. 22—Best display *Primulinus* blooms, not less than 4 inches across. Not less than 25 spikes. 1st prize \$6.00. Second prize \$4.00. 1st won by B. H. Tracy, Wenham, Mass.; 2nd won by Clark W. Brown, Ashland, Mass.

CARTER'S TESTED SEEDS, Chamber of Commerce Bldg., Boston, Mass.

No. 23—Best 12 spikes any variety in one vase. 1st prize \$5.00. Second prize \$3.00. Third prize \$2.00. 1st won by H. E. Meader, Dover, N. H.; 2nd won by R. W. Swett, Saxonville, Mass.

A. E. KUNDERD, Goshen, Ind.

No. 24—Best collection Kunderd varieties, both plain and ruffled petals. First prize Gold Medal. Second prize Silver Medal. Third prize Bronze Medal. 1st won by Clark W. Brown, Ashland, Mass.; 2nd won by P. W. Popp, Mamaroneck, N. Y.

H. F. MICHELL & Co., 518 Market St., Philadelphia, Pa.

No. 25—Best 25 spikes *Hollandia*. First prize Silver Medal. Second prize Bronze Medal. 1st won by Charles F. Fairbanks, Boston, Mass.; 2nd won by R. W. Swett, Saxonville, Mass.

L. MERTON GAGE, Natick, Mass.

No. 26—25 bulbs *Mrs. Pendleton* for 6 best spikes of that variety. Second prize 20 bulbs. Third prize 15 bulbs. 1st won by Madison Cooper, Calcium, N. Y.; 2nd won by H. E. Meader, Dover, N. H.

PERKINS-KING CO., West Mentor, Ohio.

No. 27—100 bulbs *Panama* for best 20 spikes *Panama*. Won by R. W. Swett, Saxonville, Mass.

No. 28—100 bulbs *Niagara* for best 20 spikes *Niagara*. Won by B. H. Tracy, Wenham, Mass.

CHARLES F. FAIRBANKS, Boston, Mass.

No. 29—\$15.00—first; \$7.50, second; \$2.50, third—For best seedling never before exhibited. Not less than three spikes. 1st won by L. Merton Gage, for *Mrs. Dr. Norton*; 2nd won by John Lewis Childs, Flowerfield, L. I., for *Neuport*; 3rd won by R. W. Swett, Saxonville, Mass.

THE GARDEN ASSOCIATION, Newport.

1st 2nd
No. 30—\$20.00 \$10.00—Best 25 spikes any White variety. 1st won by John Lewis Childs, Flowerfield, L. I.; 2nd won by B. H. Tracy, Wenham, Mass.
No. 31—\$20.00 \$10.00—Best 25 spikes Red or shades of Red variety. 1st won by R. W. Swett, Saxonville, Mass.; 2nd won by Wm. McKay, Newport R. I.
No. 32—\$20.00 \$10.00—Best 25 spikes Yellow variety. 1st won by Clark W. Brown, Ashland, Mass.; 2nd won by John Lewis Childs, Flowerfield, L. I.
No. 33—\$20.00 \$10.00—Best 25 spikes Pink or shades of Pink variety. 1st won by Charles F. Fairbanks, Boston, Mass.; 2nd won by R. W. Swett, Saxonville, Mass.
No. 34—\$20.00 \$10.00—Best 25 spikes Blue or shades of Blue variety. 1st won by Clark W. Brown, Ashland, Mass.; 2nd won by R. W. Swett, Saxonville, Mass.
No. 35 \$20.00 \$10.00—Best 25 spikes any other color variety. 1st won by B. H. Tracy, Wenham, Mass.; 2nd won by John Lewis Childs, Flowerfield, L. I.

HITCHINGS & Co., Elizabeth, N. J.

No. 36—Silver Cup, value \$10.00—For the most artistically arranged basket or hamper of blooms not more than 25 spikes. Won by Joseph G. Larkins, Newport, R. I.

FIRMA P. VOS, Mz., Sassenheim, Holland.

No. 37—First \$6.00; second \$4.00—Best 3 spikes *Clear Eye*. 1st won by Madison Cooper, Calcium, N. Y.

RAYMOND W. SWETT, Saxonville, Mass.

No. 38—Bulbs valued at \$5.00, first; Bulbs valued at \$3.00, second; Bulbs valued at \$2.00, third—For best 10 spikes each *Blue Jay*, *Europa*, *Panama*, *Niagara* and *War*.

AMATEUR AND PRIVATE GARDENER CLASS.

STUMPP & WALTER Co., Barclay St., New York.

No. 40—Silver Cup—Best 10 varieties, 3 spikes each. 1st won by Charles F. Fairbanks, Boston, Mass.

H. E. MEADER, Dover, N. H.

No. 41—Cut Glass Vase—Best 3 spikes of seedlings raised by exhibitor. No entry.

JOHN LEWIS CHILDS, Flowerfield, N. Y.

No. 42—Best 3 spikes each of *Charmer*, *Dazzler*, *Enchantress*, *Winsome* and *Wild Rose*. First prize \$5.00. Second prize \$3.00. Third prize \$2.00. No entry.

H. A. DREER, Chestnut St., Philadelphia, Pa.

No. 43—Best 5 spikes each *Europa* and *Panama*. First prize \$5.00. Second prize \$2.50. 1st won by T. A. Havemeyer, Glen Head, L. I.; 2nd, won by Madison Cooper, Calcium, N. Y.

JABOB THOMANN & SONS, Rochester, N.Y.
No. 44—\$5.00—Best 6 spikes any White variety.
Won by Miss Fanny Foster, Newport, R. I.

CHAMBERLAIN & Co., Wellesley, Mass.
No. 45—\$5.00—Best vase Pink seedling, 5 spikes.
No entry.
No. 46—\$5.00—Best vase Yellow seedling, 5 spikes.
No entry.

ARTHUR COWEE, Berlin, N.Y.
No. 47—\$5.00—Best vase Blue variety never before exhibited before the A. G. S. Not filled.
No. 48—\$5.00—Best vase not less than 10 spikes of *Peace*. Not filled.
No. 49—\$10.00—Best vase not less than 6 spikes of *War*. Not filled.
No. 50—\$5.00—Best vase not less than 6 spikes of *Dawn*. (Groff.) No entry.

W. W. WILMORE, Jr., Wheatridge, Colo.
No. 51—\$5.00—Best 3 spikes *Golden West*. Won by L. M. Fuller, Rock, Mass.
No. 52—Best collection, 2 spikes each. First prize \$10.00, won by Madison Cooper, Calcium, N. Y. Second prize, bulbs valued at \$10.00.

L. MERTON GAGE, Natick, Mass.
No. 53—Best 6 named varieties, 3 spikes each. First prize, bulbs valued at \$5.00, won by Madison Cooper, Calcium, N. Y. Second prize, bulbs valued at \$3.00. Third prize, bulbs valued at \$2.00.

G. S. WOODRUFF, Independence, Iowa.
No. 54—Best 25 spikes *Minnesota*. First prize, bulbs valued at \$5.00, won by Madison Cooper, Calcium, N. Y. Second prize, bulbs valued at \$2.50.

A. E. KUNDERD, Goshen, Ind.
No. 55—Best collection new Ruffled Types. First prize, Gold Medal, won by C. F. Fairbanks, Boston, Mass. Second prize, Silver Medal. Third prize, Bronze Medal.

H. W. KOERNER, Station B, R. F. D. 6, Milwaukee, Wis.

No. 56—\$5.00—Best 12 spikes *American Wonder*. No entry.
No. 57—\$5.00—Best 12 spikes *Twilight Chief*. No entry.
No. 58—\$5.00—Best 6 spikes *Blue King*. Not filled.

G. D. BLACK, Independence, Iowa.
No. 59—Best 25 spikes *Golden King*. 25 bulbs *Blue Bird*, 25 bulbs *Hiawatha*. Won by Madison Cooper, Calcium, N. Y.

VAUGHAN'S SEED STORE, Chicago and New York.

No. 60—Silver Medal—Best 36 spikes from the following varieties: *Hyde Park*, *Chicago White*, *Margaret*, *Mrs. F. King* and *Principis*. 12 spikes of each of the selected varieties. No entry.
No. 61—\$3.00—For best 12 of any one of the above varieties. Open to private gardeners of Newport and vicinity only. No entry.

BIDWELL & FOBES, Kinsman, Ohio.
No. 62—Silver Medal—Best 10 spikes *Panama*. Won by T. A. Havemeyer, Glen Head, L. I.
No. 63—Silver Medal—Best 10 spikes *Niagara*. Won by T. A. Havemeyer, Glen Head, L. I.

C. BETSCHER, Canal Dover, Ohio.
No. 64—Best 25 spikes *Primulinus* types, blooms not less than 4 inches, cut from 4 ft. stem. First prize, 5 New *Hemerocallis*, value \$7.50.

Second prize, 3 New *Hemerocallis*, value \$4.50.
Third prize, 2 New *Hemerocallis*, value \$3.00.
No entry.
No. 65—Best 25 spikes hybrids or seedling blooms from plants not less than 4 ft. tall. First prize, 5 new *Paeonies*, value \$7.50. Second prize, 3 new *Paeonies*, value \$4.50. Third prize, 2 new *Paeonies*, value \$3.00. No entry.

J. M. THORBURN & Co., Barclay St., N. Y.
No. 66—Best exhibit of *Primulinus Hybrids*. First Prize \$6.00. Second Prize \$4.00. Won by L. M. Fuller, Rock, Mass.

B. HAMMOND TRACY, Wenham, Mass.
No. 67—Silver Cup. Best 3 vases, 3 spikes each *Schwaben*, *Badenia* and *Pink Perfection*, won by T. A. Havemeyer, Glen Head, L. I.

CHARLES F. FAIRBANKS, Boston, Mass.
No. 68 Best collection and display. First prize \$30.00. Second prize \$20.00. 1st, won by B. H. Tracy, Wenham, Mass.; 2nd, won by W. Sim.

AMERICAN GLADIOLUS SOCIETY.
No. 69—Best exhibit of at least 15 varieties, 3 spikes each, correctly named. First prize, Silver Medal. Second prize, Bronze Medal. 1st, won by C. F. Fairbanks, Boston, Mass.; 2nd, won by Madison Cooper, Calcium, N. Y.

THE MODERN GLADIOLUS GROWER, Calcium, N.Y.

No. 70—For the best display of Gladiolus blooms not more than 36 spikes. No preference given to named varieties. First prize, Silver Trophy Cup valued at \$15.00. Second prize, A Life Subscription to THE MODERN GLADIOLUS GROWER. Third Prize, A Five Year Subscription to THE MODERN GLADIOLUS GROWER. 1st, won by Miss Fanny Foster, Newport, R.I.; 2nd, won by L. M. Fuller, Rock, Mass.

H. YOEUELL, Syracuse, N.Y.
No. 71—\$3.00, first; \$2.00, second; \$1.00, third—For best 3 spikes any named variety. 1st, won by L. M. Fuller, Rock, Mass.; 2nd, won by A. L. Griffin; 3rd, won by Madison Cooper, Calcium, N. Y.

MUNSELL & HARVEY, Ashtabula, Ohio.
No. 72—25 Bulbs *Hazel Harvey*—For best 10 spikes any Red variety. Won by Madison Cooper, Calcium, N. Y.

W. E. FRYER, Mantorville, Minn.
No. 73—20 Bulbs *Mrs. W. E. Fryer*, First; 15 Bulbs *Mrs. W. E. Fryer*, second—For 6 best spikes of that variety. Not filled.

RAYMOND W. SWETT, Saxonville, Mass.
No. 74—Bulbs valued at \$5.00, first; Bulbs valued at \$3.00, second; Bulbs valued at \$2.00, third—For best 6 spikes each *Blue Jay*, *Europa*, *Panama*, *Niagara* and *War*. Not filled.

ARTHUR COWEE, Berlin, N. Y.
No. 75—\$10.00—Best exhibit of 50 spikes of the variety *Peace*. Not filled.

So far it has been a favorable fall for digging Gladioli. It has been fairly dry in some sections and no serious rains have occurred to prevent practically continuous outdoor work. It is probable that growers will get their harvest under cover in good season this year. Thorough sunning promptly after digging is important.

Gladiolus Show of Garden Club of Alma, Mich.

The "Gladiolus Show" is a thing of the past, but the memory of the glowing color mass remains with all who visited the Lancashire porches that 25th day of August.

If the enthusiasm of the visitors and the resolves to "grow Glads seriously" is any proof, then the efforts of the chairmen and committees spell *success*. To be thoroughly convinced of the salutary effects of the show come to Alma, Mich., during Gladiolus blooming season next year! The 60 varieties shown by E. E. Stewart, of Brooklyn, Mich., from his wide blooming acres, and the 30 odd varieties from Vaughan's farm near Ovid, Mich., and displayed by L. L. Conn, of Owasso, added immensely to the show. Mr. Stewart and Mr. Conn were the judges and awarded the premiums as follows:

Class I—Best display named—1st, Mrs. Ezra Smith; 2nd, Mrs. H. C. Moore; 3rd, Mrs. Swartout. THE MODERN GLADIOLUS GROWER for three, two, and one year by Madison Cooper.

Class II—Best arrangement—1st, Mrs. C. L. Gardner; 2nd, Mrs. W. Balhke. Three and two dollars' worth of Gladiolus bulbs, by Raymond Sweet, Saxonville, Mass.

Class III—Best display unnamed—1st, Mrs. S. Messenger; 2nd, Miss Anna Angel. By Hira Moore "Flower Guide" and Red Ribbon Badge.

Class IV—Best Novelties—1st, Mrs. Wm. Anderson; 2nd, Mrs. W. Balhke. "The Well Considered Garden" and Yellow Ribbon by Mrs. Francis King.

Class V—Best display of *America*—1st, Mrs. H. C. Moore; 2nd, Mrs. W. Anderson. Fifty and twenty-five Darwin tulip bulbs by the "Garden Club."

Class VI—Best *Mrs. Francis King*—1st, Mrs. W. Balhke; 2nd, Mrs. Wm. Mason. Seventy-five and fifty green tying stakes by "The Gladiolus Group."

Class VII—Best *Niagara*—1st, Mrs. C. L. Gardner; 2nd, Mrs. J. Gougwer. Spool of Tying Rafia and Blue Ribbon Badge by Mrs. Ezra Smith.

Class VIII—Best Halley—1st, Mrs. Wm. Anderson. (No second). Pair Glass Candlesticks by Mrs. Nellie Scattergood.

The "Gladiolus Group" of the Garden Club is not the only active force therein by any means, as was evidenced by their Second Annual Aster and General Flower Show, which was held Saturday afternoon at "Orchard House," in connection with the regular meeting of the Garden Club.

There were splendid specimens entered for competition, and first and second prizes were awarded for best aster of any one variety. Class I.

Best Collection. Class II.

Best arrangement of asters with other flowers. Class III.

Mr. Wm. Melchers, of Owasso, and Mrs. Francis King acted as judges.

Thus endeth the first chapter. Oh! we Almates love flowers. There is no getting

around it, and we're doing right well with their culture, too, and we will soon be able to "ramify" and "fruitify" and "multiply" and "glorify" with the best of them!

MRS. EZRA SMITH, Chairman.

Storing Gladiolus Bulbs.

Every bulb of a Gladiolus put into the ground shrivels up; directly above it the new bulb forms. When the Gladiolus is in bloom the new bulb is but partially formed and, therefore, no bulbs should be harvested until the new ones have had a chance to mature.

In order to be sure of getting large bulbs many growers resort to the trick of sowing bone fertilizer between the rows immediately after cutting the flowers, and harrowing it into the ground.

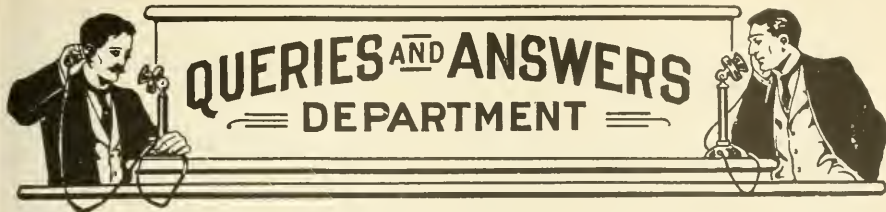
The man who grows great quantities of bulbs usually plows them from the ground as he would harvest potatoes. This work should always be done in the morning of a clear, sunny day, and the bulbs should be allowed to dry in the air for from three to four hours. They must never be allowed to remain out-of-doors overnight.

Any dry, airy place where the temperature will not go below 38° or above 45° is ideal for winter storage of bulbs. Air must be admitted from time to time, and in severe weather artificial heat must help to keep the temperature above the freezing point. Any good, dry cellar or barn will do. When the bulbs are brought in from the fields they must first be spread on the floor to dry thoroughly and cure.

In lifting the bulbs from the ground do not shake off the soil, as the increase is attached to the new bulb and it would thus be shaken off.

Any rainy day in November or December clean the bulbs by removing the old ones that are still attached to the bottoms of the new ones, carefully separate the little ones which are called cormlets, and pack them in separate boxes. When finally cleaned the bulbs are sorted as to sizes and stored until spring.—*Country Gentleman*.

The ravages of wireworms this year have been a very serious obstacle to the production of good crops of Gladiolus corms and even some of the commercial growers have suffered heavily. We would like to have some instructive information as to the habits of wireworms and the conditions under which they thrive especially well. Then we will know how to provide a remedy for them, if indeed any remedy is possible. Let us hear from as many as possible on this subject.



QUERIES AND ANSWERS DEPARTMENT

[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Striping of Niagara.

TO THE EDITOR:—

Last spring I planted 100 corms of *Niagara* which were purchased from a prominent grower in this section. The flowers, instead of being a clear yellow as I expected, are striped with pink, and in some the stripes are more prominent than in others. Will you kindly advise if this is characteristic of this variety? W. W. S.

Answer:—Niagara is one of the best yellows. It is, however, a cream yellow and not what might be called a clear yellow. It also has the disadvantage that you state of frequently being tinged with pink or crimson. In some cases this is so pronounced as to be a very positive objection. The causes of this have not been fully explained, but we believe it is caused by an excess of potash in the soil, combined with weather conditions favorable to the action of same. If any one has a different opinion we would certainly be glad to know, but this has always been our idea of the causes of excess mottling in varieties which should be practically solid color. It is, of course, a question whether the best growth can be forced on Gladioli and the excess color avoided at the same time.

Planting the Gladiolus.

How far apart should Gladiolus bulbs be planted to avoid mixing? Some varieties are increasing in number, while I am losing others. A. B.

In commercial culture Gladiolus bulbs are set in rows two or three feet apart, the bulbs in the rows their own diameter apart—that is, two-inch bulbs two inches apart. The furrow in which they are planted is four to six inches deep. In garden planting they are usually set four to eight inches apart. "Mixing" is not responsible for the loss of varieties, for this mixture of pollen, which may easily occur through the agency of insects, would only affect seed, not the original root. We often hear complaint that choice varieties have dwindled away, with the supposition that some have reverted to an original stock. This is accounted for by the fact that some varieties are much more

robust than others, making new bulblets rapidly, and being less exhausted by flower-bearing. An exhausted bulb, which was allowed to make seed, may be too used up to grow at all when planted the following Spring, while the strong grower may increase and multiply until it monopolizes the collection. Some of the finest varieties, especially among pale-colored sorts, need extra care in this way, and if it is not given, the amateur grower may find he has mainly red sorts left. Give your Gladioli good care; cut the flower spikes before they fade, and your collection should remain intact—unless, in sharing with others, you give away a preponderance of these slow growers.—*Rural New Yorker.*



AN ARTISTIC STAGING OF GLADIOLI.
(Courtesy of W. E. Kirchhoff Co.)

Cold Storage of Cut Flowers.

Every florist knows that if he keeps his cut flowers in his refrigerator, which is the ordinary ice cooled affair and familiar to everyone, that they may be made to "stand up" for a longer period than if exposed to the ordinary air of his shop. Not many florists know, however, that there are possibilities of using the regular cold storage plants or providing cold storage plants of their own for the storage of cut flowers on a considerable scale; and, as the storage of tulips especially has been brought to our attention we are taking the opportunity of giving the details of same.

A large wholesale grower who has successfully handled tulips in cold storage states that he has cut them in all stages of development from perfectly green buds to well opened flowers. He says that buds just changing color are the best stage at which to cut them. Flowers which have already opened will mold and rot if kept for any length of time, and especially if the flowers touch each other and a drop of water happens to fall inside the flower. Green buds will open but the flower will not develop to its full size as it will if cut when further matured. Buds which are just turning color are as perfect as they will be and they will not rot from moisture and will continue to grow and develop while in storage and open beautifully when brought to the light.

The longest record of keeping of tulips in storage has been 17 days, and as these were apparently as good on removal from storage as the day they were cut, they were shipped to a distance of 600 miles occupying about 36 hours in transit and arrived in perfect condition. The weather, however, was reasonably cool at the time. It would seem, therefore, that it might be possible to cold store tulips for at least three weeks' time and possibly longer under favorable conditions.

The temperature at which they were held was 38°F. with perhaps a change of one degree either up or down during the time they were in storage. An ordinary galvanized iron pail was used for the storage package in which about two hundred tulips were placed. Only enough water to touch the stems was used, about two to three inches in the bottom of the pail. The tulips were not wrapped in paper as is sometimes done as it was shown by experience that excluding the air caused a tendency to rot. Bunches of twenty-five were held together by a No. 10 rubber band. The florist who gave the information as above outlined states that he believes that tulips may be stored for

30 days if cut at the proper stage of maturity.

This same grower states that he has stored Gladioli at various times as well as other cut flowers, and he says that Gladioli are inclined to fade in storage and lack substance and keeping qualities when removed therefrom. He also states that the peony can be successfully held in storage, but details as to length of time, temperature suitable, packing and maturity of the buds when cut have not been given.

MADISON COOPER in *Cold*.

One of our Western correspondents wants to know if some of the professionals who go to the big Eastern shows will not tell the amateurs through the columns of THE MODERN GLADIOLUS GROWER just how they pack their flowers for shipment. He suggests that the shippers should have the best method so as to stand a better chance with the exhibitor living in or near the city where the show is held. We would be glad to have some suggestions along this line.

Past issues of THE MODERN GLADIOLUS GROWER show several methods of building shipping crates, but there are methods of packing the flowers solidly in boxes which are in more general use.

The rate at which the subscription list of THE MODERN GLADIOLUS GROWER is growing indicates the rapidity with which the Gladiolus is gaining in popularity. We hardly venture to predict the limits of the rosy future of the Gladiolus.

Our columns have been very crowded for two or three months and some very important matter is still awaiting publication.

"WE are the originators of Princepine and grow the other choice varieties in quantity." Send list for quotations on planting stock or large bulbs. Wholesale only. W. E. KIRCHHOFF CO., Pembroke, N. Y.

If you are a professional, commercial, or amateur grower, you will find the columns of

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GLADIOLUS—*EUROPA*.
(For description see page 156.)

The Gladiolus Manual.

By W. W. WILMORE, JR.

CHAPTER VII.

Planting and Harvesting.

AS has been mentioned in a previous chapter, the soil should be in perfect condition before planting commences.

On large areas, farm and garden tools are employed. First, the field is marked off in rows from 30 to 36 inches apart by means of a marker which consists of from five to seven pegs fastened to a heavy plank drawn by a horse. The advantage in first marking out is to get the rows of uniform width and straight. Each peg makes a mark, each mark is a certain distance apart. The shovel plow is then used to open the trench over each mark. The depth is governed according to the size of corms to be planted. The bottom of the trench is leveled by means of a drag in cases of small stock. The drag may consist of a knotted chain, a short section of tree trunk (not to exceed six inches in diameter), or any other convenient article that will crush the rolling clods which fall back after the trench is opened. The drag is fastened to the plow by means of a rope six to eight feet long and follows immediately after. For large stock the trench should be leveled with a hand hoe making a broad flat bottom six to eight inches wide. Three corms can then be set abreast in order to keep the regular distance of two inches apart each way.

Large corms are set upright, they will then be shapely when dug, whereas if tumbled every way into the trench some will be upside down which will make an ugly crook in the stem at the junction of the corm which spoils the sale. Another feature is that more or less energy is wasted by the corm in sending its sprout down and then up. They are later in coming up and do not have the root development they should have because of having their roots too near the surface.

Small corms may be sown in the bottom of the trench as peas. It matters little to them whether or not they are upside down or not as the new corm soon straightens itself after making its new roots.

Large corms should be planted from five to six inches deep, small ones from three to four inches deep, cormels or hard-shells three inches deep, or even deeper

if the soil is inclined to dry out quickly for they sometimes start very slowly.

After the trenches are planted a wing plow is used to cover. This plow is built on the principle of an ordinary turn plow except that it throws the dirt two ways instead of one. In other words it is a right and left plow combined; the molding boards are long sweeps which can be adjusted by means of a lever bringing the extreme ends far apart or close together. The *front* ends are *attached* to the shovel on hinges which allow them to swing freely. This instrument is inserted in the soil between two rows and the wings adjusted so that the earth is thrown into the open trench filling it half way. The operation is repeated on the opposite side and the trench is filled and even ridged higher than will be required. All labels are adjusted and set in their proper places and reinforced by a heavy, short stake to prevent breaking. After ridging nothing further is done until the tiny weeds begin to appear, then the hand rake is used diligently and the surplus soil is raked down killing the first crop of weeds. This work must not be neglected long enough to allow the Gladiolus sprouts to reach the surface of the soil after being raked down as the sun will blister the tender shoots and the rake will break many.

No further attention is necessary until the crop has attained a height of six inches, then the horse cultivators are used. Harrow tooth cultivators should be first employed. They loosen the soil and kill the tiny weeds fully as well as the shovel cultivators, and do not throw the dirt against the row which is apt to cover many short plants. Hoeing and weeding are always in order; never allow the weeds to grow large.

The crop should be cultivated at least once each week until blooming season, then they should be given one thorough cultivation with shovel cultivators, being careful to hill the rows as this method prevents the wind and rain from toppling over the large plants which have no other support.

If the crop is grown for cut flowers care should be taken not to remove any more foliage than is necessary. Flowers can

be cut from a plant without damaging the corm if sufficient foliage is left to mature the plant, but if the foliage is taken away the corm will ripen at the state in which the flower was cut. It will be remembered that the corm begins to form its cormels at the time the flowers begin to open and any serious check in the growth is bound to injure and check the production of this under-ground crop.

When the crop is grown for corms the flower spikes should be removed as soon as they begin to open. This can be done with a sharp knife or hand sickle nipping the spike just above the foliage. The strength and energy will be transferred from the production of flowers to that of bulblet making. The corm also will attain a larger size. The increase in cormels may be estimated 20% and the corm will be stronger.

At blooming season all stock should be checked to see if the names are correctly placed and whether the weather has destroyed the markings on the labels. All rogues should be pulled out when seen as their bulblets will cause trouble for years if once mixed with those of another variety.

Small stock should be dug as soon as large enough to work with. If allowed to ripen in the soil the small bulblets (cormels) will fall off and the task will be more difficult. Large stock should be taken up when the tips of the leaves turn brown and the foliage in general takes on a yellowish appearance.

In digging large areas the writer has found the following methods most practical, although different growers practice different systems. Each is governed by his particular soil and climatic conditions. In Colorado we begin digging Sept. 1st to 10th. The tools used are spading forks, pruning shears and a machine drawn by two horses. This machine is built on the principle of a subsoiler; it is built on two runners like a sled. These runners are 30 inches apart. Between the runners and attached to either side is an adjustable blade which runs under the row at an angle, cutting off the roots an inch or so below the corm and at the same time loosening the soil. This blade is raised or lowered by means of a lever. At the back of the machine is attached two plow handles for guiding and turning while in operation. At the front is attached an ordinary wagon tongue to which the horses are hitched. The row is straddled, one runner sliding on each side of the row. After the row is cut and loosened an ordinary spading fork is used to lift the corms. In cases of large stock they are

pulled and piled keeping the corms and tops one way; the pruning shears are then employed cutting the stems close to the corm. They are dropped into shallow boxes 14 x 22 x 5. These boxes are stacked in the field in the same manner that children build blocks, leaving as much air space between each box as is possible, stacking alternately. They are left to dry and cure, covering at night with canvas sheets to prevent freezing.

Small corms are dug in a different way. These are topped as they are taken out of the soil in the following manner: After the row has been loosened in the manner described they are taken out by hand, first pushing as much dirt away from either side as possible. The tops are gathered together in one hand, the other hand is run under lifting them out. As much earth is removed as possible without shaking off the offsets. They are then broken off from the tops by stripping the fingers down the tiny stems. They are dropped into a sieve, the mesh being small enough to prevent the small offsets from falling through. The large clods can be picked out and the contents tipped into a box as has been mentioned, these should not be too deep in the boxes as they dry more slowly.

It is the digging of the small stock that makes the Gladiolus game hard to play. At best it is very tedious and slow work and there are always more or less small ones left in the soil to be scratched out, especially if one wishes to secure all the offsets which is always the case with new and rare varieties. In cases where each and every corm and cormel is wanted the only system is to first dig as has been described and then go over and scratch out the dirt in the row handful by handful.

In digging short varieties, trials and seedlings of small quantities, heavy paper sacks are the most convenient. They can be tied up and many stored together in one box without danger of mixing. They also can be set aside in an out-of-the-way place till planting time next season.

The Holland growers grow differently than the American growers. Their land is limited and it is necessary for them to make all space count. They plant in solid beds not rows. All work is done by hand, using mostly the hoe. The digging is done mostly with a fork and they employ but little horse labor.

In cases of small areas where the plant is used as an ornament, such as in parks, private gardens, etc., the stock can be handled in much the same manner as has been given, using a spading fork for lift-

ing, or even an ordinary shovel. The fork is preferable for the reason that it will only mar the corm when coming in contact with it whereas a shovel will cut it in two.

The principles of planting and harvesting are good soil, proper depth, correct labeling, good cultivation during the growing season, digging when ripe, proper curing and protection from frost. It will be noted that newly dug corms are very tender and will not stand the slightest touch of frost while green.

[Continued next month.]

The Gladiolus in Australia.

BY A. WHITE.

Greetings from this end of the world. Greetings from one flower lover to his kind across the sea. Mr. Cooper says he would like to hear about Gladiolus growing in Australia. I am afraid there is not much to tell him yet, but there soon will be, for this flower is "coming" in Australia with a run.

A few years ago it was hardly known here save to a few enthusiasts who grew it so as to compete in the "C Bulbous" class at the various shows. I am speaking more particularly now of the State of New South Wales where I live. In the States of Victoria and South Australia there were also a few who grew Gladioli. It was neglected; in fact it was not known. Even to-day the seedsmen catalog nothing newer than *America*, *Baron Hulot* and similar varieties. But they will next year.

A few years ago I imported a batch of Pfitzer's best, also a shipment from Holland, and a smaller shipment from America, and by making displays here at the various shows and at the various florists in the city, I have created quite an interest in Gladioli.

I have been growing carnations here for years but after growing the modern Gladiolus I am afraid it is a case of "on with the new love." Not that I am giving up carnations, but they will certainly have a rival in Gladioli, and as I have climbed to the top of the carnation business in my state so I intend to be at the head of the Gladiolus business.

Regarding growing: Our seasons are totally different from yours. Even as I write (July 7th) it is midwinter, and I am sitting near a fire, while you are enjoying the sunshine and the flowers. But spring will be here soon. We commence planting about August 1st to catch the shows about end of October, and we

continue planting up till about end of February. We get best results from stock planted about January 1st, as the blooms open slower and better in autumn (March and April) than in the late spring and summer. For remember our temperature in the shade occasionally goes up to 108 F. so imagine what it must be in the sun with one of our "westerlies" blowing like a furnace blast. However, by continuous cultivation and copious watering we get excellent results.

Now regarding varieties: I have had excellent results from *America* (comes spotted here in summer), *Hulot*, *Willy Wigman*, *Princes*, *Europa*, *Schwaben*, *Grosfurst Elizabeth* (splendid), *Lily Lehmann*, *War* (sorry to mention it just now), *Peace*, *Dawn*, *Rosella* (too spindly), *Philadelphia*, *Vivid*, *Intensity*, etc. I had a great show of *Peace*, and sent in a basket of about 45 spikes to one of our leading florists. He put them in a bucket (nothing smaller would hold them) and covered the bucket with crepe paper and displayed them in the window. After a while an idea struck him, he took off the paper and displayed the bare bucket full of the beautiful blooms, and attached a card *Peace by the bucketful*. It drew a great crowd and as a result I have orders for several dozens of *Peace*.

Yesterday I received and planted a sample lot from E. E. Stewart. It is altogether too late or too early for planting here, but as the ground never freezes and we get no snow, only light frosts, I risked them and planted. I will let you know result later.

I might say that there are in Australia several good local productions but not in sufficient quantities to market yet.

One word more to your growers: Australia is a great field for your produce. The Gladiolus is "coming" and you will find a good market here for your bulbs.

In response to several requests, and through the courtesy of Clark W. Brown, who kept the records, we are able to furnish the names of the varieties winning in some of the color classes at the Newport Show of the American Gladiolus Society last August as follows:

Class	Color	1st	2nd
1	6 White	<i>Europa</i>	<i>Europa</i>
2	6 Pink	<i>Panama</i>	
3	6 Yellow	<i>Sulphur King</i>	<i>Schwaben</i>
4	6 Blue	<i>Miss Fairbanks</i>	<i>Badenia</i>
5	6 Red	<i>Liebesfeuer</i>	<i>Dazzler</i>
6	6 Any other color	<i>Loveliness</i>	<i>Mrs. A. C. Beal</i>
31	25 White	<i>Alaska</i>	
32	25 Red	<i>Mrs. F. King</i>	
33	25 Yellow	<i>Mongolian</i>	<i>Canary Bird</i>
34	25 Blue	<i>Baron J. Hulot</i>	<i>Blue Jay</i>

MRS. AUSTIN'S TALKS FOR AMATEURS.

TEST YOURSELF.

When the Gladioli were in bloom and you saw those great beauties and the growers working among them, and possibly bought a bunch, and it seemed to you that every one who saw them would do as you did, and that there must be great sale for them, now didn't it look easy, and could you not imagine how the pocketbook of that grower was full to bursting? And you laid awake most of the night thinking of them and then slept only to dream of great plantings of Gladioli.



"When the style shows are on in autumn it takes a little nerve to stay at home and dig the bulblets and seedlings."

oli, each possessing distinctive merit and worth its weight in gold, then awoke, sleepily aware that you had been treated to a glimpse of your subconscious self, but fully decided to take a hand in the growing of Gladioli.

Many women, both old and young, are now planning this, and the advice of one who has experienced many of its pleasures and disappointments, is to first "Test Yourself" before putting too much money in your pet scheme. Find out what some of the harder parts of the work and business are and whether you are adapted for or have a taste for such work. To do this thoroughly, perhaps it would be well to choose what you believe to be the hardest part of the work for the first year and follow it to completion. Probably

the most tedious is the growing of bulblets and seedlings. To do this well the plot should be spaded up and manure well worked in this fall, and it is advisable to sow it to rye, even if it is late, for it may be an open winter when it will grow well, and the growing rye full of sap is another form of valuable manure when turned under in the spring. There won't be any harm in doing a part of this spading yourself for unless you are very fortunate in always securing good help you may at some time be obliged to do at least a little of such work, perhaps to save a bunch of seedlings which you believe to be choice, but that your very dearest friend tells you she never would bother with. "Dig those things out of the dirt, no indeed!"

You may feel abashed and that you are making a spectacle of yourself, but such remarks should not worry you. Time was when it was considered the proper thing for woman to be the frail and clinging vine, and the country girl equaled her city sister in the guarding of her complexion. Of course it was necessary for her to be more in the open and the sunbonnet stiffened with cardboard slats was not uncommon. But the girl who loved the open air and sunlight, and followed her father as he worked, and wore the bonnet around her neck instead of on her head, early learned the importance of knowing how to do things out of door. It was nice to learn music and read poetry, and to cook and bake, but when the father was away and a windstorm blew the fence down allowing the cows free access to the field of corn, she could forget both frailness and sunbonnet and with authoritative "whey, there," persuade the fiercely horned creatures into the barn, slip the plugs into place in the wooden stanchions and save the corn.

The frailness, the sunbonnet, and the cow horns are gone, and now the big hatted, short skirted, high booted woman is slowly but surely taking up the outdoor industries, for this is an era in the

march of human progress wherein she is taking her place recognized as the equal of man, and a hundred years from now the muse of history will record her achievements as well as those of man, and not the least of these will be the farming of flowers.

Determination and stick-to-it-iveness are essential to success in anything, and after a winter of opportunity for planning and study of the flood of catalogues that may be yours for the asking, procure for trial a few each of the varieties of Gladioli you believe to be the best for your purpose whether for cut flowers or for the sale of bulbs. Finish preparing the plot for planting by again spading and working the soil until it is light and mellow. Mark out the rows and have them straight, not always an easy task, sprinkle in a little fertilizer (it won't smell good) covering it lightly with soil. Plant the bulbs near or far, deep or shallow according to size of bulb and quality of soil, sow the bulblets and seed; then keep the cultivator or hoe and rake going all summer. After the rain and it has dried off a little you would like an auto ride, but the Gladioli must be cultivated. Would not the lake breeze be cool and refreshing those long, hot summer days, the Gladiolus blooms must be cut, and when the Style shows are on in Autumn it takes a little nerve to stay at home and dig the bulblets and seedlings. Dig them and spread in the sun if possible to cure and when dry spread them over the wire sorter to get them free from soil. It is a dusty job but many of the roots of the small sizes will be rubbed off, and after the remaining ones are cleaned, sorted and counted or estimated you have them ready to sell or plant the next year. The selling of them is a business by itself. Learn to grow them first. Are you willing to do all these things and many others unthought of, this year, five years, ten or twenty maybe? If you are sure of it, you need not be afraid to invest your money. You have stood the test.

MRS. A. H. AUSTIN.

It may have been noted that THE MODERN GLADIOLUS GROWER has offered prizes at the various flower shows, and we would like it to be well understood that a prize of a subscription or subscriptions to THE MODERN GLADIOLUS GROWER will gladly be contributed to any regularly announced flower show where Gladioli are especially mentioned in the program, the length of subscription depending, of course, on the importance of the show.

Europa.

[Subject of illustration on our front cover page.]

Europa was introduced to commerce in 1910 by its originator, Wilhelm Pfitzer, and immediately created a furore. It is of the *Gandavensis* type with full rounded petals and flowers uniformly placed along the spike both rows facing one way. The flowers are inclined to open at once and carry from eight to twelve full open blooms at one time. It is without question one of the best white Gladioli ever brought out and is pure paper-white with just a trace of color like a single drop of claret at the base of the throat. This is only noticeable on close inspection. The anthers are blue.

The flowers are medium large, carried on a spike approximately 30 inches tall. The spike is medium to slender with foliage of a light green color. In refinement there possibly is no variety to excel it. The corms are medium in size yielding a fair number of cormlets. In other words, it would not be considered a shy bearer. Color of corm, orange. Comes into bloom in from ninety to one hundred days from planting.

The only fault with *Europa* is that it is not as strong constitutionally as is desired, but its behavior along this line is better in some localities than others. By careful selection and using acclimated bulbs, this difficulty should be overcome to a great extent.

One of our subscribers calls our attention to the fact that class No. 68 in the list of prizes and prize winners at the Newport Show of the American Gladiolus Society as given in the October issue, shows that the winners were B. H. Tracy and W. Sim. As both these gentlemen are professionals, class No. 68 plainly should not be in the amateur section. Secretary Youell informs us that about two weeks before the Newport Show Mr. Fairbanks decided to place his prizes in the Open Class and this accounts for the apparent error in the list of awards as given.

The adjourned meeting of the Gladiolus Society of Ohio will be held in connection with the Flower Show of the Cleveland Floral Societies on Friday, Nov. 12, at the call of the president. Election of officers, naming time and place for the next Flower Show, and other matters of importance are to be disposed of at this meeting, and every member is urged to be present.

WILBUR A. CHRISTY, Sec. and Treas.

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
PUBLISHED MONTHLY ON THE FIRST OF THE MONTH BY
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Special favors to none, and a square deal to all.

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Vol. II.

November, 1915

No. 11

Do Gladioli Deteriorate?

Most emphatically, they do. It is not necessary to go into much detail nor to be very specific to prove this to the experienced observer. In my own experience of a lifetime with the Gladiolus, I have seen many varieties deteriorate and even beyond recognition almost. This is a fact even when most favorably treated in every respect, including care in growing, storage, etc. No doubt what is often considered as deterioration is only lack of careful handling and growing. Yet, aside from this, the lessening vitality, decrease of size of blooms and change of colors, etc., cannot all be attributed to weakened effects from disease nor to variable seasonal conditions.

About eight years ago we were increasing an unusually fine, new white variety until we had several bushels in all sizes of it when, one rather unfavorable season, its blooms were noticeably inferior in both size and color. My experience taught me that the variety was doomed to failure but on account of an unfavorable season and the fact that it still produced a splendid corm and abundant cormlets, and also to make it another "test case," I reserved the stock (or rather a part of it) and planted it again for at least four years. Even under various favorable conditions

the results were continuously disappointing.

However, deterioration is no special fault of the Gladiolus. Not all varieties are alike affected, and many other flowers and vegetables are likewise afflicted. I will only mention two very generally known subjects, viz: Carnations and potatoes. It is perhaps well that we find Gladioli not all reliably "fixed" in character, in order that still new and even continually improved varieties may also find room and popular favor. The almost endless varieties of form and color combinations yet to come afford great pleasure and stimulus to the originator, as well as enjoyment and profit to the public in general.

A. E. KUNDERD.

Can National Societies

Hold their Members?

Under the above title we have read an article in the *Florists' Exchange* which is very pertinent indeed and a question which has come up to many members of national organizations. Any society which holds its members in all parts of the Union has a difficult problem, and we might even suggest that it is well nigh an impossible one.

A society which attempts to satisfy a national membership is more than likely

to get into the hands of a ring controlled in one section of the country and, therefore, members residing elsewhere are likely to lose interest and the society as a national organization is not representative and a failure to that extent. Unless national societies hold their meetings at widely separated points central to their membership, and likewise their flower shows, they certainly cannot expect to influence and interest their members. An organization which holds its flower shows only in the East, for instance, cannot expect to retain the co-operation of its Western members. The problem is a difficult one and we do not offer a solution but simply state a fact. The publishing of a periodical or annual by the society is of doubtful utility when the particular subject which the society aims to promote is already more fully covered by publications issued monthly or oftener.

How the national societies can hold their members is a question that the officers and active members of the societies will need to wrestle with, but certainly they will need to handle it in a different way than it has already been handled if a favorable solution is to be found.

MADISON COOPER.

The tendency for some growers, both amateur and professional, to condemn varieties of Gladioli on one year's trial only is certainly wrong. In conversation recently with one of the most experienced commercial growers he stated that a variety could not be properly judged until it had been grown for three successive seasons, and this suggestion should be carefully remembered by those who are inclined to condemn without sufficient trial. Unfavorable climatic or local cultural conditions might account for failure to perform properly the first year a variety was tested. On the other hand, conditions for growing may be more favorable the first year and after growing for two or three years results might be quite different. Don't be in too much of a hurry

to accept or reject any particular variety as one of your standards until you have time to judge it.

Vaughan's Seed Store reports that the digging of Gladiolus corms has begun in the west and that while high and dry land is showing a good yield, yet soil that is low and inclined to retain moisture is not producing more than two-thirds of the crop that it should. Certain parts of the east report the same result, and as many sections have been literally flooded with rain this year, it is probable that the production of corms may be seriously cut down. If this is the case, and if the Holland growers will not have as much stock as last year, as reported, it is probable that better prices may be realized by those who make a business of growing for market.



A single shortened spike of *Gladiolus Europa*.

WAYSIDE RAMBLINGS.

AUDITING THE GLADIOLUS EXHIBIT—DO
GLADIOLI SPORT?

The varieties of Gladioli, like Sweet Peas, are confusing to the novice, and would not an audit of the exhibits at both the American and English shows be interesting to all your readers?

The new recruit is apt to give up the cultivation of the Gladiolus or any other flower, on account of the number of "new" varieties brought forward each year, which, on trial, too often turn out to be "new" only in name. It is also difficult to select from a description in a catalog. How many catalogs give the same variety as the very best white, red, or yellow? However anxious we may be to select our varieties from growing specimens it is, to the majority, impossible. It is here where the audit might be useful.

May I quote from the Sweet Pea Society's Annual for 1914?

GENERAL AUDIT.

Variety	Times Shown
Hercules	72
Thomas Stevenson	68
R. F. Felton	64
Mrs. W. C. Breadmore	56
Sunproof Crimson	56
Elsie Herbert	54
Mrs. Cuthbertson	44
Agricola	40
Nubian	40
Edrom Beauty	38
Elfrida Pearson	37
Barbara	36
Cream (Dobbie's)	34
John Ingram	33
Rosabelle	33
White Queen	32
Clara Curtis	31
King Manoel	29
Etta Dyke	27
Mrs. Hardcastle Sykes	26
Queen of Norway	26
Lavender Geo. Herbert	25
Maud Holmes	23
Mrs. Hugh Dickson	23
W. P. Wright	23
Lady Miller	22
May Campbell	21
Charles Foster	21
Edith Taylor	21
Doris Usher	20
Melba	20
Mrs. E. Cowdy	19

In a note on the above the Editor writes:

"Hercules sixteenth in the list in 1912

heads the list for 1913, and Thomas Stevenson occupies second place for the second time. Clara Curtis has fallen from the high position held for four years, and Mrs. W. C. Breadmore and Elsie Herbert are the only varieties that have kept near the top, being fourth and sixth respectively as compared with sixth and third positions in the 1912 audit. John Ingram keeps a relatively good position considering how long it has been in cultivation, while Etta Dyke and Mrs. Hardcastle Sykes are still favorites. R. F. Felton, twenty-fourth in 1912, has risen to the third place."

Having made some progress with the audit some steps might be taken with the question of color classification.

At the London Gladiolus Show held on the 4th of August (the exhibits, I am sorry to say, were very few in number) a vase of *Baron Joseph Hulot* and one of *La Nuit* were in two adjoining exhibits, and I asked an exhibitor what difference there was in the two flowers. His reply was "None." I must confess that I could see no difference from the color point of view, but the former was slightly the larger flower. I have grown these two flowers, and *Marie* and *Negro Prince* in the same bed and I think they would come under the term Too-Much-Alike Varieties. This year they flowered in the following order: *Marie*, 28th July; *Baron Joseph Hulot*, 1st August; and *La Nuit* and *Negro Prince*, 2nd August. In the same row as *Marie* was one corm which gave a flower of a different shade to all the others.

This brings up in a mild form the question, "Do Gladioli Sport?" I have several variations in color this year for which I cannot account on any other ground. Corms will, of course, get mixed, however careful one may be in the handling of them, but when one sees a flower come up unlike anything known to have been planted, what is the explanation?

— GEO. CHURCHER.

WHEN TO DIG GLADIOLI.

Not until the tops are ripe. Dig an *America* that has just matured the tip bloom, and you find the corm not near the normal size and with few bulblets. I once had a block of *Oriflame* of usual maturity Sept. 1st. I wished to plant Peonies in the same place. I dug several rows of the Gladioli and dried them off carefully. About Nov. 1st I dug the remainder of the Glads and found the last dug corms fully one-third larger and better in every way than those dug before maturity.

E.

PETAL ARRANGEMENT OF GLADIOLI.

To one who has not given the matter previous attention, a little study of the arrangement of petals in a Gladiolus bloom should be of interest. There are six petals in two sets of three each, an outer and an inner trio. They may be arranged in two different ways: First, with the lower petal belonging to the inner trio as in Fig. 1; second, with the lower petal belonging to the outer trio, as in Fig 2.



Fig. 1

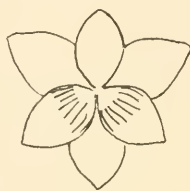


Fig. 2

Especial interest attaches to the blotching of those varieties which are blotched. With the first arrangement, as in Fig. 1, the lower petal has the blotch. With the second arrangement the lower petal is mostly covered by two of the petals of the inner trio. What good to decorate it if it cannot be seen? Dame Nature prefers to decorate one of the inner trio that can be seen. But if she should blotch only one of the two petals that cover the lower petal, the flower would be lop-sided. So she blotches both of them, giving us some flowers with a single blotch, and some with two blotches. However, some varieties have blotches on all three of the lower petals, but the under petal or petals are covered, so that only two blotches or one blotch can be seen.

Some varieties have principally the first arrangement, others the second, while others still, as *Pendleton*, seem to have no great preference, and on the same spike will be found blooms with one blotch and others with two.

C. C. MILLER.

PRIZE WINNING VARIETIES.

The only thing lacking in the report of the Newport Show of the A. G. S. was the omission of the name of the variety to receive the first prize in the various classes. For instance, Mr. Havemeyer's Open Classes Nos. 1, 2, 3, 4, 5 and 6. Jacob Thomann & Son's No. 8; also the prizes offered by the Garden Association of Newport. It would add greatly to the interest of the growers unable to attend to have the names of the winning varie-

ties. If the editor will make an effort to secure the names and give them to us in some future number of the magazine, I am sure he will add to our obligation for the very interesting magazine we are now receiving.

GRACE RE SHORE.

TEN BEST VARIETIES.

In response to the editor's request for selection of the ten best varieties of Gladioli I submit the following:

Niagara, *Mrs. Frank Pendleton*, *Mrs. Francis King*, *America*, *Dawn* (Tracy) or *Taconic*, both fine pinks; *Baron Hulot*, *Augusta*, *Europa*, a fine white but expensive; *Madam Lemoine*, wonderful in arranging; *Harvard*, (Tracy) or *George Paul* (Cowee), *Panama*.

For six other varieties I should select the following: *Attraction*, *Peace*, *Vivid*, *Rosella*, *Pink Perfection*, *Loveliness*.

F. M. S.

Is *Europa* Weak?

From a personal experience would say that it is betwixt and between. It would be overreaching the mark to say that this grand variety is a strong grower, but acclimated bulbs with me have produced spikes of fair length, all blooming, and of foliage not the most vigorous but far from weak. How could there be anything more beautiful than this grand sort, and it surely would be a mistake to discard *Europa*, for such tender delicate beauty could not be hoped for and possibly would be out of place on a four foot spike and two inch foliage? The writer has a seedling of *Europa* and the only distinguishable difference is in the color of the corm, the former a very light yellow and the latter orange. Let us hope that it may be even an improvement on *Europa*. Time will tell.

JOE COLEMAN.

In response to our request for the names of interested people, many of our subscribers have sent us names of Gladiolus growers in their vicinity. We have sent sample copies to all of these and we are hungry for additional names, so that we can give them the same treatment. Sample copies bring subscribers and this spreads the good work.

If you have no Gladiolus seed of your own for next year's planting, be sure and secure some before the time comes for getting it into the ground. Grow from seed or you miss a great deal.

The Gladiolus; Why and How.*

WHEN your worthy Secretary did me the honor to invite me to address you I was quite diffident about accepting, as I am neither gifted nor experienced as a writer or speaker, nor do I profess superior knowledge of the subject assigned me. However, chancing to make inquiry concerning the Society, of a good German friend and flower lover, he said, "Vell, yes, I pelong to id, but I don't go to de meetings often for dey chust talk about noding but Apples." Whereupon I concluded that, even though my address might not be conspicuous for



C. R. HINKLE

scientific knowledge, diction or eloquence, I might at least divert your attention for a few minutes from the tedium of "Apples."

So I hope to interest you in the subject: "The Gladiolus; Why and How."

Perhaps you are wondering "why" I say "Gla-di'-o-lus," and if that is "how" it must be pronounced. Let me tell you that I often say "Glad-i-o'-lus," in the way our mothers said it, and if you choose to do likewise none but a captious critic may object, for it may be pronounced either way. The Century Dictionary and the

Standard Dictionary show only the pronunciation "Gla-di'-o-lus" although the Standard, rather queerly and in seeming contradiction, shows "Gla-di'-o-lus" as the generic name and the word "Glad-i-o'-lus," spelled exactly the same, as a specific name, defining it as: "A plant of the genus *Gla-di'-o-lus*; the corn-flag." But our old friend, Webster's International pronounces the word "Gla-di'-o-lus or Glad-i-o'-lus." The preferred pronunciation, "Gla-di'-o-lus," is explained and justified by the statement: "The penultimate 'o' in this word is short and the accent, therefore, as Latin, properly falls upon the antepenult, 'Gla-di'-o-lus,' as indicated by most orthoepists. 'Glad-i-o'-lus' is, however, common in popular or colloquial usage."

Now, if you care to run this to earth, you will find that the difference arises in the method used in pronouncing the original Latin. If the "Roman" method is used (and the savant will tell you that is preferable,) the "o" is short and you have "Gla-di'-o-lus;" if the "English" method is used you have "Glad-i-o'-lus."

So, there you are! "Pay your money and take your choice," and possibly the more money you pay or, perhaps, the more money you have, the more you will be inclined to say "Gla-di'-o-lus." I beg you, though, to not say "Gladiolas" or "Gladiolias" or even "Gladahlias," as I have heard.

The commercial grower, with labor-saving propensity, calls them "Glads" and it would seem that this is, in a double sense, a happy name, for the glorious beauty of this flower certainly "maketh the heart glad."

If the rose may be called the "Queen of Flowers" then it seems to me we may say, with equal propriety, the Gladiolus is the "King of Flowers." It is a regal and majestic flower with a richness and beauty of bloom in endless combinations of rainbow colors unequalled in the floral world. It is the crowning glory of the gardens of royalty and wealth, yet with kingly graciousness deigns to lend the splendor of its bloom to brighten and cheer the gardens of the lowly. With imperial strength it overcomes all obstacles and proudly lifts on high its royal banner to the sun.

This regal flower will grow for anyone, almost anywhere. It is strong, healthy and practically immune from disease and attacks of insects. It has a long season of bloom and is unsurpassed as a cut

* Address by C. R. Hinkle, before the Wisconsin State Horticultural Society, at its Annual Convention, Madison, Wis., December 15, 1914.

flower, the buds opening up after cutting equally as well as if growing in the garden. It is inexpensive and gives rich return in wealth of bloom and abundant harvest, and of all the flowers I know it is the one best adapted to be grown by everybody.

And that is the "Why" of the Gladiolus.

The Gladiolus has been known to cultivation for over three hundred years. Most of the hundred and fifty species are natives of South Africa, some of Tropical Africa, Southern Europe and Western Asia. Only a few of them are desirable, except in the production of hybrids.

The history of the modern Gladiolus dates back only about seventy-five years, when there originated a hybrid very superior to the type, which was named the *Gandavensis*, after the Belgian city of Ghent, (Gand) where it was produced. On coming into public notice this variety placed the Gladiolus among the favorite garden flowers and it increased rapidly in popularity with the introduction of still more beautiful and desirable sorts which followed, such as the *Lemoinei* and *Nanceianus*, produced by Victor Lemoine, of Nancy, France, and the beautiful production of *Max Leichtlin*, of Baden Baden, Germany, which was sold to John Lewis Childs of this country, who gave it his own name, *Childsi*, upon placing it upon the market. From these and their various crosses and hybrids has come the modern Gladiolus in all its glory.

Cross-pollination or fertilization has produced many thousands of beautiful varieties, in practically all shades and combinations of color and forms of marking and shading, until it would seem the limit had been reached, yet the work of the hybridizer goes on and today there are hundreds of growers engaged in the production of new varieties in countless numbers, from among which the best and most desirable are saved and put on the market.

In the survival of the fittest there is taken into consideration size and substance or texture of flower, brilliancy of color and beauty of combinations and markings of flower, form and number of flowers on spike, length of stem and spike, strength of constitution and growth of plant and reproductive quality.

The Gladiolus is propagated in three ways; by division or increase of the parent bulb, by bulblets growing at the base of the new bulb, and by seed. The first two ways produce blooms like the parent, but blooms of seedlings all differ from each other. Theoretically, no two are alike. From this method of propagation the new varieties originate.

Speaking with strict accuracy, the fleshy subterranean body of the Gladiolus is not a bulb, but a corm, and the so-called bulblets are cormels, but the use of the term bulb is practically universal and I will use it as it would seem pedantic to use the other.

And in this address I will not treat of the early-flowering or so-called "Winter-blooming" varieties, which are negligible as compared with those of the Summer garden.

The essentials of Gladiolus culture are simple. Give full exposure to sun, a soil fairly rich, plenty of water and thorough cultivation during the growing period.

SOIL.

A sandy loam soil is best for the Gladiolus, but it should be sufficiently firm to afford some support to the plant and not wash away in rains. An ideal soil would be sod, plowed in the fall, left rough through the winter and in spring thoroughly worked and pulverized. If not sufficiently rich, a potato phosphate or any complete commercial fertilizer may be safely applied if worked in when preparing the ground, at the rate of five or six hundred pounds per acre. Manures may be used if well rotted and covered in below the planting depth, preferably during the preceding fall. If conditions make it inconvenient to apply the fertilizer before planting, good results may still be obtained by preparing a liquid fertilizer from pulverized sheep manure and applying about the plant after growth has started. Never use fresh stable manure if possible to avoid it. In any event use only if applied in the preceding fall and allowed to lie and leach during the winter. Stiff, heavy clay soil should be lightened by the addition of humus or sand, so that it will conserve moisture.

PLANTING.

By planting at intervals of two weeks, from the middle of April to the first of July, in this latitude, a succession of bloom may be had from July first until frost. You may risk planting a few a little earlier, if in a sunny and protected situation, for the early planted ones will be slow coming and probably not put in an appearance until danger from frost is past. And they are not so tender as is sometimes thought. I have known sprouts several inches high to be caught in a late snow, and even frozen slightly, yet come through it without damage, producing flowers before the end of June.

If you are planting only a moderate quantity, plant the smaller bulbs first, the

greater substance of the larger ones permitting them to be kept longer. (By the way, if you get the "Gladiolus Fever" that word "moderate" will become very elastic.) If planting on an extensive scale make plantings at slightly longer intervals and let large and small bulbs go together as they run at each planting, which will give succession of bloom.

If planting in beds or clusters for ornamental purposes open spaces between bulbs may be left in the earlier plantings in which others may be planted later, providing for succession. Ornamental plantings should be in irregular clusters to avoid stiffness or formality and appear most effective when displayed against a background of shrubs or evergreens. Planted among Peonies, Larkspurs and other early blooming perennials they furnish a needed and pleasing succession of bloom through the summer and fall.

Field planting should be in rows twenty inches apart, so they may be cultivated with the wheel hoe, that preventer of gardener's backache. In extensive planting requiring use of horse cultivator the rows should be three feet apart. Plant bulbs four or five inches deep, according to whether the soil is heavy or light, and from four to ten inches apart as place or character of planting may make desirable. In field planting the space between bulbs may be decreased to as little as two or three inches if room is limited, and if growing for bulb production only, plant in double rows.

Bulblets may be planted quite thickly, as many as 300 or 400 to the foot of row, so the delicate grass-like shoots may unite their strength in pushing through to the surface. Plant in flat bottomed trenches five or six inches wide, covering them a couple of inches deep, then drawing the soil up in a ridge a couple of inches high over the row. This permits stirring with a steel rake when the first weeds appear, which weeds will do even in the best regulated garden, and even another raking when the second crop of weeds starts growth, without hurting the tops of the little plants. This plan of ridging up after planting is worth practicing on large bulbs as well, for by this method most of the weeds will be easily disposed of and hours of more arduous labor saved. Before planting bulblets keep them moist awhile, until they show signs of germinating, as most all have an extremely hard shell covering them and may be slow in starting or even refuse to come up at all unless given this preliminary assistance. Two years are usually required to bring bulblets to blooming size.

Growing from seed requires particular care. The soil must be good and in the best of condition. Plant seed rather thickly, after fashion of bulblets, an inch deep. Cover, and then after moistening thoroughly, place burlap over them, to conserve moisture and prevent crusting. Keep covered and moist until growth is well started and keep free from weeds. Two years are usually required to get blooming bulbs from seed. The labor and care given seedlings will be forgotten when they arrive at blooming size and you see for the first time new varieties that have never before bloomed in anybody's garden, and possibly find among them some of superior merit and value.

CULTIVATING.

While the Gladiolus does not demand petting and will stand neglect with more fortitude than almost any other flower it responds readily to good treatment and well repays care in cultivation. To accomplish best results it is essential that the soil be put in good condition before planting, that weeds are kept out and that the surface be constantly kept loose and free from crusting or baking.

It is also desirable that the tops be protected from being broken down by winds, particularly after the flower stalk grows sufficiently for the buds to attain size and weight. Damaged tops means damaged bulbs. In small plantings they may be staked but in large plantings where that is impracticable protection may be afforded by ridging up the soil on each side of the row when using the hoe or plow so that by the time the stalks get heavy they will be braced by six or seven inches of earth. This not only serves to support the stalk but benefits the bulb by keeping it cooler and moister.

WATERING.

The dust mulch made by proper stirring or cultivating of the ground usually conserves moisture sufficiently to make artificial watering unnecessary except in times of protracted dry weather. The earlier plantings are not likely to need more water than Dame Nature will give them, but the drier days of summer may cause later plantings to need artificial watering. The rule may be water only when necessary and then give plenty. Do not sprinkle, water copiously. "Soak it to them." Irrigate if possible. Bear in mind that cultivation must be resumed just as soon as the ground may be worked, after each rain or watering.

CUTTING.

The object in growing will determine manner of cutting the blooms. If growing

for bulbs only, the flower stem is cut as soon as it appears and all leaves left to feed and develop the bulb, which derives much of its sustenance from the foliage. If growing flowers for cutting then it will be desirable to cut some of the leaves with the flower stem. Understand that the more foliage is cut off the more the bulb will be dwarfed. Most varieties, however, will furnish a sufficiently long stem for cut flower needs and still leave from four to six leaves to bring the bulb to maturity. Unless seed is particularly desired do not allow it to form as this will surely exhaust and dwarf the bulb.

HARVESTING AND CURING.

Three or four weeks after blooming is usually sufficient to mature the bulbs, so that digging may then be done if circumstances require or they may be left in the ground until the first frost comes, after which we usually have ideal weather for curing. In digging, use a cultivating or spading fork. Sink it beside the row so that upon prying with it the bulbs will be raised in the loosened ground which will usually open at the stalks and permit the bulbs to be lifted out by the tops and the soil cleanly shaken from them.

Clip the tops off close to the bulbs when taken up and allow them to cure by exposure in crates to sun and wind for a day or two or several days. Afterward remove crates to a dry and airy place, safe from frost for a little further curing. These crates should be not more than four inches deep and should have ventilated bottoms, preferably of No. 6 screen wire, which will prevent the loss or mixture of the bulblets. In two or three weeks it will be found that the old bulbs can be most easily and readily removed. This operation usually takes with it the first or outer husk or fibrous sheath that covers the bulb, leaving it in a clean, silky, attractive condition. Do not remove the rest of the coverings but leave them for protection of bulb. At this time the bulblets may be separated from the bulbs and old roots. The old bulbs and roots also adhere tenaciously when first taken up but as the curing nears completion they may be pushed off with a very minimum of effort.

STORING.

Put bulbs in crates and rack them up in such manner as to allow circulation of air. Store in cellar or other frostproof place where the temperature is uniform and around forty to forty-five degrees. Small quantities may be put in paper bags. Keep dark, if practicable. Toward spring examine, and if found sprout-

ing, lower the temperature, if possible, and turn them at intervals. Bulblets should be stored in boxes or bags, with a small quantity of soil, so that they may not dry out too much and harden their shells.

And that is the "How" of the Gladiolus.

Those who wish to know more of this most desirable flower which is so well worth knowing should read the only book on the subject, "The Gladiolus," by Mr. Matthew Crawford, the "Dean" of the Gladiolus school in America, and Dr. Walter Van Fleet, and subscribe for THE MODERN GLADIOLUS GROWER, a most interesting and helpful monthly magazine, published at a small price by Mr. Madison Cooper, Calcium, N. Y.

The Gladiolus is the flower for everybody; I wish that everybody would grow it. To see it excites admiration; to grow it excites enthusiasm. The King of Flowers is the Glorious Gladiolus.

A teacher required her children to write what we used to call a "composition" but which is now called a "theme." She said: "Do not indulge in flights of fancy, or copy the writings of others; simply say what is in you." The production of one youngster was: "Teacher says not rite any flites of fancy but just tell what is in us. In me there is my stummick, lungs, heart, two cookies, two apples and my dinner."

I have endeavored to tell you "what is in me" about the Gladiolus.

But do you observe that even I do not seem to be able to make a talk on another subject before this Society without referring to "apples?"

Practically all Gladiolus corms are doubtless in storage by the time this issue of THE MODERN GLADIOLUS GROWER reaches our readers. If there are any belated ones, there is most always a time in November when there is no frost in the ground and Gladiolus corms may be dug.

CLASSIFIED ADVERTISING.

Growers having surplus stock for sale will find this department effective in disposing of it. Five lines (about forty words) \$1.00 per insertion. Additional lines 15c. each.

"WE are the originators of Princepine and grow the other choice varieties in quantity." Send list for quotations on planting stock or large bulbs. Wholesale only. W. E. KIRCHHOFF CO., Pembroke, N. Y.

YOUR DOLLAR will buy more here—quality and quantity—75 best mixed Gladioli, \$1.00 prepaid. All kinds of high grade seeds, greenhouse plants, potting dirt, labels, etc. One quart mixed bulblets, \$1.00 prepaid. Gladiolus seed, per 100, 15c. PAUL L. WARD, Hillsdale, Mich., Plant Specialist

THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.
Published Monthly by Madison Cooper, Calcium, New York.

Vol. II.

DECEMBER, 1915

No. 12



GLADIOLUS—*PINK PERFECTION*.
(For description see page 177.)

The Gladiolus Manual.

By W. W. WILMORE, JR.

CHAPTER VIII.

Curing and Storing Corms and Cormels.

AS fast as the corms are taken from the soil it is necessary to start drying them out so that they will cure, thus preventing rot and the development of disease. In order to do this they must be placed in some convenient receptacle so that they can be taken in out of the weather, or moved in a hurry should it be necessary, as often rains will undo that which has taken weeks to accomplish.

The best and most convenient utensils in which to dry the corms are flat wooden trays. These can be stacked one on another alternately as children build forts with blocks, leaving air spaces between each tray. They should not be deeper than five inches, and if the corms are small they should not be filled more than two-thirds full. The little fellows fit closely together and exclude the air, and they also carry more or less soil which retards their curing. As to length and breadth of the boxes, it matters little if they can be handled with ease. Those used by the writer are 16x28 inches and five inches deep, with perfectly tight bottoms to hold any loose bulblets which might fall through a small crack and into a box of a different variety which would cause a mixture.

We have in nice weather spread large corms out on large canvas sheets to cure. These we turn every few days to allow the under ones more air. When on canvas they can be quickly taken into shelter by transferring them into boxes or barrels. Some growers spread them out on the ground to cure, or even pile them in stacks in the field. This is not in accordance with the best practice for several reasons; they are hard to gather, more or less surplus earth is taken up with them. Another reason is that many small bulblets or cormels are left which would be saved by the former method, and lastly, should the weather turn bad one could not shelter his stock as quickly as he could otherwise.

When drying corms in the field care should be taken not to allow the direct rays of the sun to shine on the corms, as bright, hot sunshine is very severe on them and often saps their vitality and softens them. They should, however, be dried in the open by shading with a scattering of discarded tops.

Small lots of stock, which are composed of trial varieties, new seedlings, etc., may be cured and stored according to their quantity. Small lots of this sort may be stored in paper bags and small boxes. A quantity of a dozen large corms and their proportionate small cormels can be easily put into a paper bag plainly marked and stored away in boxes where they will be out of the way till planting time next season. Larger quantities can be stored with each variety in a tray and plainly marked.

It may be well to here mention something about marking. We all know that after a tray is used several years it will have several names written on it which becomes confusing should the old names remain undestroyed which is often the case. Some growers mark with paper tags. These are tacked to the end of the box or tray which can be torn off easily when a new name is wanted. This is a very good system with one exception and that is, that the tags are sometimes torn off by accident and may be unnoticed at the time, this, of course, is more confusing than if the box had two names. The writer once had this experience not with one but a dozen or more boxes. While he was busy working with stock at one end of the cellar his little girl was busy pulling off the tags on the boxes at the other end of the cellar. Since that time the pencil has been used, and after the name the date is used to distinguish, and also the number of boxes contained in the lot. For example, should there be four boxes of *America*, it would be labeled as (*America*, (4) '15), by this system one knows exactly his quantity and is sure of the name.

Large quantities are best handled in tight bins the bottoms of which are made of common flooring, tight enough to hold all hard-shell bulblets. These bins can be built two feet apart, in height, which will allow four bins in height in an ordinary cellar. Each bin is ten inches deep which can be filled almost to the top if stock is well cured before being stored. Each bin can be partitioned off according to the quantity to be stored and is marked in the same fashion as boxes.

Before stock is taken to the cellars it

should be sieved as all hard-shells will fall off with a little rubbing over a half-inch mesh. The clinging dirt will also fall through, leaving a clean lot of corms to be stored which will be free of bulblets. The bulblets are sieved to get rid of the fine dirt and chaff, and are stored in barrels so that they will not dry out. This is necessary so that they will be in readiness to start in the spring, whereas if they are dried out they start very slowly or fail entirely.

Cellars should be dry as possible and absolutely frost-proof. In case of warehouses where heat can be used to keep out the frost, this storage is equally as good if not better than cellars, as the best of cellars are usually more or less damp. The temperature should be kept around 40° and plenty of air supplied especially during mild winter days.

Storage for amateurs can be followed in the same general manner. Small quantities can be placed in paper bags tied at the top with a string and hung up in the coolest part of the cellar but secure from frost. Do not allow the stock to lay around where mice and rats can get at it as they sometimes eat *Gladiolus* corms, and more often destroy the sacks in which they are placed, or the tags used for labelling.

One item of interest that may here be spoken of, is that often severe weather sets in before all the stock is out of the ground. In cases of this kind the stock can be dug and stacked with the tops still on, stacking in a circle, the tops to the outside in a manner in which wheat is stacked. The stack can then be covered with trash, making it frost-proof. They can then be topped at leisure.

[Continued next month. Chap. IX—"Cleaning and Grading."]

The Little "Ragamuffin" Scores.

BY HARMON W. MARSH.

The Little Ragamuffin looked as honest as he was dirty (which is a remarkably strong character testimonial.) He stood on the sidewalk in his little bare feet and gazed boldly into the face of The-Man-of-the-House. "Please give me a flower," he said.

After sizing him up, The-Man-of-the-House said, "I think I will. Come into the garden," and he showed The Little Ragamuffin how to mount the terrace and reach the path without stepping on any of the plants.

"I want one of that kind," cried The Little Ragamuffin, pointing a stubby finger at a superb clump of *Mrs. Francis King* Gladioli. But they were the special fav-

orites of The Little Lady, so the man led the ragamuffin over to the dahlias and filled the little hands with them, and The Little Ragamuffin took his leave, announcing that he would come again some day.

Half an hour later The Little Ragamuffin passed the garden with empty hands. "Where are your flowers?" inquired The-Man-of-the-House.

"I gave them to Martha," replied The Little Ragamuffin, "Will you give me some more?"

"I'm afraid not," said The-Man-of-the-House. "When I give people flowers I like to have them take the flowers home and put them in water. I don't like to have them give them away."

"They die in water, and Martha likes flowers," disappointedly, and The Little Ragamuffin trudged off down the hot street.

The Little Lady who, during this conversation, had her nose buried in a bunch of mignonette, walked up the path, slipped her arm as far as it would go around The-Man-of-the-House and asked, "If you should make a million dollars today, what would you do with them?"

"I'd give them all to you Little Lady."

With a pathetic little droop to the corners of her mouth she whispered, "The Little Ragamuffin gave *his* treasures to *his* little lady."

"And he was manly enough to ask for them too," said The-Man-of-the-House, and sent a shrill whistle after The Little Ragamuffin, who turned and came up into the garden again.

The-Man-of-the-House took out his garden knife and strode to the Gladioli. "Here," he said, cutting, "is crimson for the warm blood in your little heart, and here is purple for your royal loyalty to your little lady, and here is a big white one. Peace go with you, and come to see us again."

And the corners of The Little Lady's lips turned upward again and from between them issued a little thrill of joyous laughter.

Contradictory reports have been received as to the results of the *Gladiolus* corm harvest this year. In some places the weather was fine and reasonably dry during the latter part of the season and a good crop of corms has resulted. In other places excessive moisture has resulted in a difficult harvest, and corms more or less blemished, while in other places excessive moisture during the growing season has materially reduced the yield.

White Gladioli.

BY GEO. S. WOODRUFF.

As there has been considerable talk about white varieties from time to time, I will add a little contribution of the results of my experience. Going back to the older varieties, I have found *White Lady* perhaps the finest of all white Gandavensis sorts but of a poor constitution, unproductive and certain to get the blight if there are any germs within a mile. *Rochester White* is so nearly like *White Lady* that, you know, some of the experts have doubted whether it is not merely a good strain of the latter. I confess that I have not tried it lately but the fact that the price keeps up indicates that it is not a good producer. *Blanche* has always been entirely unsatisfactory with me, having a crowded head, much addicted to blight and no producer. *Augusta*, in spite of its lavender tinting, has merits that keep it still in the foreground of florist's sorts, opening nearly white if cut early enough and being free from disease. *Chicago White* (which is much better looking than the recent cut indicates) is a little yellowish and has the colored lines but has the merit of extreme earliness and has a long spike of well-opened flowers. It seems difficult to keep it back late enough for the Fairs. *Alice Carey* is very good among the near whites, rather dwarf and clothed with an abundance of willowy foliage. The flowers have well defined lines and face opposite on the stem. Good substance and a good keeper.

About *Europa*: It does not look strong and the foliage is pale in color but I had fine flowers this year from corms only $\frac{1}{2}$ inch in diameter, plenty of them and good long spikes. I confess to a great admiration for *Lily Lehman* which I have grown in quantities this year for the first time. It is very early—ahead of *Chicago White*—and the flower is unique, lily-like in form and came out white without any tinge of pink but a very faint yellow shade in the throat. Later plantings, coming on in the excessively wet weather, were pink tinged. There are usually two or three branches to the stem and the flowers face in different directions. It is an amateur's rather than a florist's flower. I do not agree that *Glory of Holland* is common and I think it practically one of the best. It is strong and healthy and the flowers practically pure white, at least in my soil. I had them from both early and late plantings. *Reine de l'Anjou*, alias *White Excelsior*, has been better with me than I expected. A strong grower and the flowers, on spikes like *Augusta*, pure white.

Think they will not last quite so long as *Augusta* when cut but without the lavender tint of the latter. *Peace*? This is doubtless one of the finest of Gladioli and the ground color the whitest but it is late and the spike rather too long for general use. Mr. Huntington says it is not white. I think both he and I got from Holland two years ago some alleged "*Peace*" in small-size bulbs, which seemed at first to be correct but which proved later to be something else. I know he had some of them and wonder if he had not them in his mind when he wrote that statement. The plant was dwarfer, the flower tinted and the corms orange instead of pale yellow as in the true *Peace*.



GLADIOLUS—PINK PERFECTION.

A single shortened spike. For description see page 177.

MRS. AUSTIN'S TALKS FOR AMATEURS.

GETTING READY FOR WINTER.

After the unusually rainy summer season the beautiful weather of the fall was eagerly welcomed. The blooms had given much promise but with scarcely any opportunity for cultivation, and with weeds running riot Mr. Glad. Grower shook his head soberly when the prospective crop was mentioned. But nature had been kind and gave lavishly of quality and quantity. The crop was all and more than was expected. Because of the early rains much other work had been delayed waiting for pleasant weather, and when

part of the harvest work done, the gathering of the varieties grown in large quantities could be hustled more. It did not take long to get a wagon loaded in the field, and when brought to the storage cellar they were forked over and tossed lightly about to loosen and shake off the bulblets and then forked into trays leaving the loose bulblets and soil in the bottom of the wagon box. As many of the bulblets were to be sold they were shoveled from the wagon box into a riddle and shook back and forth over a roller laid on a frame, thus sifting the soil out and leaving the bulblets clean. If the bulblets are to be kept for planting it is best to leave them in the soil during the winter. The riddle used measures 18 inches by 36 inches with sides 4 inches



Mr. Austin cleaning the cormels as they come from the field.

it came it was the harvest time and the question of getting the crop into safety before winter's cold came, was serious. The small lots of choice varieties were first cared for, which is always a slow job for it is not best to trust that to unaccustomed hands. The lots were of all sizes perhaps a hundred or more of only two or three bulbs each, the trying out lots they are called, and next were those that had been tested and found desirable and were being increased as fast as possible, every tiny bulblet watched for. This was where Mrs. Glad. Grower showed superior patience, with that very important

high. Copper screen mesh 6 wires to the inch, which allows very small bulblets to go through with the soil. For choice, valuable stock, use a mesh with 8 wires to the inch.

At last the crop was harvested and in storage but it had not all been pleasant, the looked for cold storm came with its warning to make haste, but was followed by the balmy south wind bringing the Indian Summer.

"Shawondasee, fat and lazy,
Had his dwelling far to southward,
In the drowsy, dreamy sunshine,
In the never-ending Summer,
From his pipe the smoke ascending

Filled the sky with haze and vapour,
Filled the air with dreamy softness,
Gave a twinkle to the water,
Touched the rugged hills with smoothness,
Brought the tender Indian Summer."
[Longfellow]

Some Gladiolus Fallacy.

We quote below from *Big Four Successful Poultry Journal* from an article by Joseph Dagle:

"You all know the Gladiolus. While we keep some strains of bulbs in their purity, the blending of colors by propagation is so fascinating that we blend a large number of different colors every year. *This is done by setting two bulbs of different colors so that they touch each other in the bed.* The young bulbs that form that season will throw bloom of different colors from the parent bulb, and while we cannot tell just what colors to expect, we are sure of some new color creations every season."

Evidently Mr. Dagle has never grown Gladioli. If he had he would know that no such mixing of color was possible and, really, we print this quotation to correct an error, and to illustrate the absurd ideas which are circulated on floral and horticultural subjects.

Prize Winners at Minnesota State Fair.

Mr. D. W. C. Ruff, of St. Paul, won all first premiums at the Minnesota State Fair not only in Gladioli, but in Dahlias as well. His winning varieties of Gladioli were as follows:

Red, *Mrs. Francis King*; pink, *Panama*; white, *Europa*; blue, *Baron Joseph Hulot*; yellow, *Niagara*.

For best twelve varieties, 12 spikes each, he staged:

Mrs. Frank Pendleton, I. S. Hendrickson, Intensity, Mrs. Francis King, Europa, Panama, Niagara, Taconic, Dawn, Rosella, America, William Falconer.

Flower Show Crudeness.

"It seems to me there is abundant room for some artistic person with bold and original ideas to devise some really pleasing method of staging Gladioli. The formality of long rows of vases filled with noble spikes of these gorgeous flowers is a drawback to the effectiveness of a large collection. Cannot Mr. Felton or some gifted artist show us something new in arrangement?"

The foregoing, clipped from the *Horticultural Trade Advertiser*, of London, indicates that the flower industry in England, like that of our own country, is permitting its best opportunities for publicity and advancement to be lost through indifference or inability to show their products to the public in an attractive and impressive manner. The day of "long rows of vases" has gone by, and exhibitions depending upon that worn-out and monotonous method of displaying flower exhibits are making a costly mistake.—*Horticulture*.

After the strenuousness of the harvest season a vacation of a few days would not come amiss, and where better than the Flower Show? It was a great meeting place. There we renewed acquaintance with old time friends, and saw, for the first time, faces of several with whom we have had a long business acquaintance.

The flowers, the fragrance, the music, the beautiful coloring, brought to mind for were there not the usual three great Genie who guided the Fairy Kings and Queens and their myriads of subjects? Given the Magic Rose our eyes were opened to the wonder work of the Fairies and we beheld a great forest of animated flowers, whispering, nodding and smiling, coquettishly appealing for admiration in a dainty spirit of rivalry.

From leafy bowers birds trilled their happy songs, and bronze wood nymphs seemed to listen. Wonderful Art! But some one has said that "Wonders of Art are not so to him who created them, but are the natural movements of his own great soul, shadows of himself."

Stealing through the murmur of the thousands of happy visiting Ladybirds came a soft melody, alluring and sweet, and from the ivory whiteness of the heart of the dell we glimpsed the beautiful rhythmic dance of the Butterflies.

At the feast, jolly Uncle Turvey, a roly poly Fairy laughed the guest into merriment that echoed through the glen, while Fireflies floated o'er showering all with petals from the rose, and its dewy fragrance.

MRS. A. H. AUSTIN.

Forcing Gladioli.

Every florist who has a local trade should force a good batch of Gladioli. The Colvillei corms can be planted in flats or beds and will flower in from fourteen to sixteen weeks. When planting in benches, allow about five inches between the rows and two or three inches in the rows. The corms should be placed about three inches deep. There are many beautiful varieties in the smaller flowered or Colvillei section and for later forcing we have in addition to these the large flowered sorts. Give them a temperature of from 50° to 55° at night. When they have made fairly good roots and top growth they will be greatly benefited by weekly doses of liquid manure, which will help the size of the flower.—*Horticulture*.

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No. 12

Eliminating the Amateur.

By referring to the report of the last meeting of The Gladiolus Society of Ohio on page 177, it will be noted that this organization has decided to eliminate the distinction between the amateur and the professional classes, compelling all exhibitors to show in the same class.

This is a very effective, not to say arbitrary way of ending the controversy as to who should be classed as a professional and who should be classed as an amateur. Whether the proposed ruling is reasonable and correct or not, there is certainly room for argument. The small amateur just beginning to exhibit certainly stands no chance whatever against the professional. On the other hand, the advanced amateurs are fully able to put up as good an exhibit as the professional, and there is no other reason why they should not exhibit with the professionals except that they are not in fact professionals and should not be so classed. It would seem that the amateurs are given comparatively little consideration by the professionals and certainly there is no encouragement to amateurs who are just beginning to grow sufficient stock for exhibition to enter the flower shows in competition with those who make a business of it. It really seems to us a short-

sighted policy for any organization to eliminate the amateur class entirely from their prize list. As the rules are made by professionals entirely, however, the amateurs necessarily are obliged to take what is given to them and they have no recourse. Unless the amateur is encouraged to exhibit, he is not encouraged to become an advanced amateur, and some of the greatest advances in the growing and developing of the Gladiolus have been made by those who were at one time or still are real advanced amateurs, and who grow the Gladiolus for a love of the work and not for profit. MADISON COOPER.

The Gladiolus in Mixture.

With the increasing tendency of recent years in favor of "color scheme" planting, the practice of growing flowers in mixture has largely fallen into neglect.

Although an admirer of the later methods, I cannot overlook the beauty and pleasures to be enjoyed from growing our favorite flowers, also, in "the old fashioned way," especially when colors are fairly well blended and in proper proportions, or even when they are grown in colors of stronger contrast. Lovers of the Gladiolus are aware of the possible arrangements often seen of a combination of *Baron J. Hulot* and *Sulphur King*, one a

deep purple and the other a yellow. The use and value of both the self colored or blended color methods, and that of more contrasting colors is clearly illustrated in those two very popular varieties, *America* and *Mrs. Frank Pendleton*. While the delicate self-color of the former is always in harmony with the most refined tastes, the magnificent beauty of the latter with its strongly conspicuous color contrast ever elicits the greatest of popular enthusiasm and admiration. Nature, the supreme artist, often displays her scenic beauty in most magnificently blended colors and tints, but never forgets to also place them in the strongest possible contrast.

I am well aware that all mixtures are not equally beautiful, and that oftenest the tint and color combinations are not well chosen nor in proper proportions as to quantity and variety of colors. It is the duty of the originator to so assemble his productions as to be able to present to the amateur the highest and best possible results.

The practically unlimited tint and color combinations among Gladioli, and its great future along this line still before us, makes it impossible to secure more than a slight fraction of the pleasure obtainable, if we confine ourselves to a strict color arrangement. The insistence of some on the use of certain color shades only, deprives them of the opportunity of seeing with what an endless and marvelous variety and beauty our favorite flower has been endowed by the Creator. Those specialists whose love of the Gladiolus has enlisted their life in the development of this wonderful flower are ever most happy in the observance of its unnumbered variety. A. E. KUNDERD.

NOTE—Mr. Kunderd has promised us an article for next month presenting the best types, arrangement, sizes, etc., of Gladioli. Mr. Kunderd's extensive work with Gladioli and his ability as a close student should make him eminently well qualified to present this subject in authoritative and interesting form.—THE EDITOR.

The weather man seems to have been extremely good this year to those growers who were short of help or for any reason behind with their digging. While the fine, fall weather experienced up to the middle of November could hardly be called "Indian Summer," yet it was dry enough and fine enough so that work in the field could progress with considerable regularity considering the uncertainty of that season of the year.

We are pleased to see that so eminent an authority as A. E. Kunderd approves of growing Gladioli in a mixture. Many of the professional growers rather sneer at the idea of growing mixtures, but just the same, to an amateur and especially to a beginner, the mixture will give the greatest satisfaction providing, of course, that it does not contain too much altogether worthless stuff.

What is an Amateur?

The solution of this question has provoked more spirited discussion than any other we call to mind in connection with flower shows. Because of erroneous interpretations of the word, good gardeners and valuable members of Horticultural Societies have been alienated, to the detriment of the society and the member thus affected.

The definition of the word amateur as given by the Royal Horticultural Society of England is here quoted, for the benefit of Flower Show committees, who are called upon to decide the vexed question this fall. It certainly is in harmony with good common sense, even though it may not satisfy those who have a disposition to split hairs, or quibble over technicalities:

"By the word amateur is understood a person who maintains a garden with a view to his own use and enjoyment and not for the purpose of making a profit or gaining a livelihood. The fact of his disposing of surplus produce for money does not change him into a tradesman unless the maintenance of the garden is intended to return him an annual profit."—Daffodil Year Book, 1914, p. 136.

—The Pacific Garden.

We are again holding over matter this month which really should be printed but our pages have been quite crowded for several months back. We are also holding some extra good illustrations which will appear during the winter.

WAYSIDE RAMBLINGS.

AN INTERESTING GLADIOLUS FREAK—BLOOM
FROM SEED THE FIRST YEAR—
UNUSUAL CROSSES.

Here is a print to show a Gladiolus with four rows of blooms, 33 florets on the main stalk and 7 on a branch. Close ex-



amination will show the *four* sheaths around underneath the very full crown. The flowerstalks came out in folded form, (Fig. 1) quickly changing to a star section (Fig. 2) and then a square stalk under the buds. There were two of this



FIG. 1

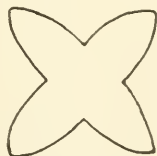


FIG. 2

variety, and another probably the same, but of ordinary form.

The garden also is fortunate now in a 42 inch stout stalk with 16 inches of bloom in 180 days *from seed* of *Youell's Favorite*. The wide-open florets, over four inches

across are pure white except a distinct crimson dash in the throat, with the "all around" character and full top of its known parent. There were also two other blooms, 127 and 147 days *from seed* of *Blue Jay*.

In another amateur garden, resplendent with tigridias and Gladiolus seedlings, there were among the latter two distinct crosses from the former: the petals *alternately* large and quarter size but otherwise in Gladiolus form, stately and handsome; the colors of one were the same dark orange red and peculiar yellow characteristic of one variety of tigridia, and the other seedling followed in color the white and pink tigridia. This is in accord with the statement in a late issue of THE MODERN GLADIOLUS GROWER relative to crosses of iridaceae.

All of my Gladiolus seeds that had any life in them came up under burlap, pinned down close over the bed and kept wet. When very many of the shoots were two inches or more through the burlap not one was disturbed in carefully removing the cloth from them. So much again for your advice.

ALBON P. MAN.

REPORTING VARIETIES AT FLOWER SHOWS
—"THE TEN BEST."

TO THE EDITOR:—

The September number of THE MODERN GLADIOLUS GROWER, just to hand, contains a report of the show of the Gladiolus Society of Ohio, but does the report contain any information of use to the reader? There is a general reference as to the quality of the blooms exhibited, but the most important information is absent—the names of the varieties which gained the awards.

Take class 7 for example, the report does not say how many entries there were, but three prizes were awarded. If the names of the principal flowers in each exhibit were mentioned, it would be interesting to your readers to see how many of them (if any) appeared in each exhibit. And so as to the other classes, where the blooms were of sufficient merit to be noticed. Such information would be useful to both small and large growers who have not the opportunity to attend the big shows. It helps in many ways. Some of the varieties we may have grown, and it is always pleasant to have your opinion of a good flower confirmed by a higher authority. On the other hand, we may never see the varieties we have been growing with varying success, and be induced to try those which meet the judge's eye.

Catalogue descriptions are not always reliable, (I have grown some few with only the Catalogue as my guide) and where space is valuable the disappointment is the greater when "realization" is far behind "anticipation."

Incidentally if the information foreshadowed is supplied in the future it may help to the solution of "The Ten Best."

G. C.

AMATEUR OR PROFESSIONAL?

In re Amateur and Professional. One is prompted to ask why should there be a distinction? The answer might be for the good of the business; or, for the encouragement of the beginner; for the protection of the grower who sells his product. Most of the argument seems to have been along the lines of the last answer.

There seems to be a perfectly natural division, with the line of cleavage separating the grower for pleasure from the grower for profit. Necessity for a distinction seems to arise only for the purpose of classifying exhibitors at the shows. The one who grows corms or spikes for sale is dependent upon the pleasure seeker. The pleasure seeker is largely dependent upon the breeder, who may be more of a pleasure seeker than a profit seeker.

To continue the classification of amateur and professional seems like following a precedent established for some other business wherein there could be no confusion. The sale of corms or the exchange of same should not make one a professional, nor a profit seeker, although the result desired in either case would be the same.

Is it not possible to divide Gladiolus growers into two grand sections, breeder and fancier, or amateur, if you wish, and then re-classing both divisions into beginners and professionals? Such a classification would give four classes, beginning and professional breeders and beginning and professional fanciers. The breeder class to include all who grow corms and spikes for the immediate profit. The fancier class to include all who exhibit, at any show in the United States for two or three years, whether continuous or interrupted, to be beginners; exhibitors who enter shows exceeding the three year limit to be professionals. Such an arrangement should offer latitude enough to protect the profit seeker from the savage encroachments of the "pleasurer," while at the same time giving ample encouragement to the fancier to enter the shows.

J. H. McELDOWNEY.

IS EUROPA WEAK?

I think not if you get them into your soil while they are young.

Last year I planted one hundred *Europa*, size four, they were from two sources but both were, I am sure, grown in Holland the previous year. They gave plenty of bloom for the size of the bulbs planted last year, but none were allowed to mature on the stalk.

This year they were again planted in a fairly rich soil and when the buds were up above the leaves they were given liquid manure twice a week. The bulbs so treated gave a number of spikes as good or better than I have ever seen at the shows, so I conclude that the heavy feeding was a great help to the bloom. They are still in the ground (Oct. 10th), so I do not know how the bulbs will look when dug, as a very good authority tells me that the liquid manure will produce scab same as the application of fresh manure would if applied to the ground before planting. I would like to hear from others if this is their experience also.

GRACE RE SHORE.

NAMES OF GLADIOLUS GROWERS WANTED. TO THE EDITOR:—

Could you tell me who grows for wholesale or retail trade the varieties of Gladioli mentioned below? These I have tested and would like to buy them in quantity:

Armenian	Astarte	Badenia
Daytona	Deuil de Carnot	Gretchen Zang
Empire	Jean Dieulafoy	Lavendula
Ezra Rust	Belle Mauve	Chaumont
Florence	Charlemagne	Desdemone
Heliotrope	La Comete	Le Verrier
Azure		

I think most of above are French productions. I have hard work to get them true of retailers in this country. I want these varieties to sell again.

B. F. STALNAKER.

STAKES FOR MARKING VARIETIES.

After 60 years' experience in nursery business I have found nothing else equal to Red Cedar for marking stakes. I get Red Cedar fence posts from the lumber yard, have them ripped into boards about $\frac{3}{4}$ inch thick and $1\frac{1}{2}$ to $2\frac{1}{2}$ inches wide. Cut these to proper length, paint with good white paint, write the name before the paint is entirely dry. The stakes will last 20 years or more, and the writing at least 10 years.

E.

[Note—Probably it was intended that the boards should be planed before painting.]—Ed.

Fragrant Roses.

By H. G. READING.

MANY people value fragrance as the chief qualification in the selection of varieties of roses suitable for outdoor growing, especially if they are intended to be used as cut flowers, and it is fortunate that many of the choicest Hybrid Teas combine entrancing beauty with delicious perfume.

In seeking such roses for his garden the novice must often rely on the descriptions in the catalogues of the dealers, but unfortunately, some of these descriptions are not strictly accurate, and especially in the matter of giving information as to the relative amount of fragrance they possess. My own experience in testing quite a good many varieties prompts the above statement. In fact, four of the most deliciously scented roses that I have in my garden are described in all the catalogues I have ever seen quite minutely as to their other qualities and habits, but not a word to let the prospective purchaser know that they are fragrant in the least degree. The novice might thus overlook the most desirable ones to be obtained. Other roses that are woefully weak in fragrance are sometimes given credit for being "highly perfumed." This misstatement doubtless results from the habit of copying word for word from the original prospectus of the introducer, who generally claims in phraseology reeking with superlatives every desirable qualification for his latest creation. Not only do the catalogues pay little attention to fragrance in roses, but in many of our best works on roses and rose culture this quality is slighted or entirely ignored. Even in that sumptuous work recently published, "The Practical Book of Outdoor Rose Growing," by George H. Thomas, valuable for its profusion of magnificent colored plates and detailed descriptions of many new roses; although each rose is analyzed and classified so thoroughly that 14 columns are required to tabulate as many qualifications, it seems not to have occurred to Mr. Thomas that fragrance was of enough importance in a rose to entitle it to any notice or consideration whatever.

A list of delightfully fragrant roses that would embrace a good variety of colors would necessarily begin with *Killarney*. I mention that sterling variety first because it probably stands first and foremost as the world's best rose to date. It certainly is the most popular. Then might follow *Madame Jules Grolez*, usually described as

bright china rose in color, even more fragrant than *Killarney*, and as free and constant a bloomer, whose charming buds always come perfect, making it an ideal rose for the boutonniere: *Chateau de Clos Vougeot*, rich crimson, shaded black, probably the darkest colored hybrid tea rose yet produced, having fine, stiff stems for cutting and the true old fashioned rose fragrance highly intensified. In white, *Entente Cordiale*, (*Pernet-Ducher*), is most heavily scented, almost as strongly as a tuberose, but the rose is not quite as hardy as *Kaiserin Augusta Victoria*, a reliable old favorite, less fragrant but quite similar in form and color, both having a somewhat yellowish or creamy shading. If a fragrant yellow rose is wanted, *Madam Ravary* will produce almost continuously on well established plants, large flowers of moderate fulness, with good stems for cutting.

Mad. Caroline Testout, is a bright satiny rose colored variety that embraces fragrance in addition to its other sterling qualities. It is exceptionally hardy and very popular, having all the desired qualifications, with no faults, unless large and thorny pricklers might be objected to.

Mary, Countess of Ilchester, is a comparatively new rose of English origin which is making good here. It is hardy, and as profuse and continuous a bloomer as *Killarney*. The flowers are of a lively, brilliant carmine in color, somewhat flat in shape, but very showy; and in a bed of mixed varieties this rose will stand out conspicuously. Its fragrance is not strong, but of true rose quality.

If additional hybrid teas are desired, *Betty*; *Pharisaer*; and *La Detroit* could also be included, as each is endowed to a large degree with pleasing fragrance.

A list of fragrant roses would be incomplete without mention of *La France*, an old rose with wonderful fragrance that is pleasing and distinct from that of any other variety. Unfortunately, it does not succeed with every person, as its blooms do not always open perfectly, especially in wet weather; and they often come balled, refusing to open at all. It is also considered a rather short lived rose. To those who wish to try it I would offer this advice. Give it moderately poor soil and not much attention as compared to that demanded by other choice varieties. It is one of the very few roses that does not appreciate coddling and high and rich cultivation.

Another rose that I have not placed

near the top of my list, is *Duchess de Brabant*, although its fragrance would entitle it to a position there. But it has little else to recommend it, and being a true tea rose, it is not hardy enough for outside growing in the northern sections.

Gruss an Teplitz, a vigorous growing variety bearing clusters of large double dark crimson fragrant flowers in the greatest profusion continuously from early June until frost, is preeminently the rose for garden decoration, and should be planted liberally for that purpose. Its weak stems, however, make it valueless for cutting.

All the varieties I have enumerated above are not quite as hardy as the Hybrid Remontants or so-called June roses, and in the extreme north would require winter protection, such as being hilled up with earth for 8 or 10 inches, after the ground is first frozen in November.

There are not so many fragrant roses in the misnamed Hybrid Perpetual class, which is declining somewhat in public favor because of the short season of bloom that characterizes most of its varieties, yet there are a number of old favorites that are still popular and much called for because of being exceptions in their habit of bloom, or for their other good qualities. About all red roses are endowed liberally with true rose fragrance, and the big red roses of this class are especially in demand, chiefly for their size and color. Some of the very oldest of these have not as yet been surpassed, and such valuable red roses as *Fisher Holmes*, *Senator Vaisee*, *Marshall P. Wilder* and *General Jacqueminot* will not soon become entirely discarded. Likewise, the popular old rose, *Paul Neyron*, has earned his claim to immortality on account of the enormous size and usual perfection of the huge, fragrant pink blooms which come more or less continuously throughout the summer on stems as long as those which characterize *American Beauty*, a fragrant rose I omit because I am considering exclusively outdoor roses for the garden, and this variety is generally worthless for that purpose, requiring considerable skill to bring it to perfection under glass. If you have a so-called *American Beauty* in your garden that bears good roses, the chances are that you owe a debt of gratitude to some accommodating dealer, more considerate than honest, who furnished some other—superior—variety.

For an all-round, dependable rose for the home grounds or garden, probably no one surpasses or even compares with *Mrs. John Laing*, a fragrant pink rose of easiest

culture. Coming perfectly on long, thornless stems, adorned clear up to the bloom with ideal, mossy foliage, each flower is a bouquet in itself, and as it is a true ever-bloomer, a rarity in its class, and always reliable, it may well be termed "everybody's rose."

What a lamentable pity that the most beautiful rose the world has thus far produced is absolutely lacking in fragrance! *Frau Karl Druschki*, that gorgeous and immaculate emblem of purity, white as the driven snow, as free and continuous of bloom as a tea rose, lacks only that one qualification to cause its name like Abou-ben-Adhem's, to "lead all the rest."

The Well-Considered Garden.

A book under the above title by the well known and popular floral writer, Mrs. Francis King, of Alma, Mich., is on our desk. While we do not pretend to be well versed in general floral matters and the many phases of garden culture, yet this book which Mrs. King has given to the public, certainly appeals to our sense of proportion and business instinct. The book consists of nearly 300 pages printed in easily read type and it is profusely and appropriately illustrated, the illustrations for the most part being applicable to the text. The twenty-seven chapters are divided systematically, beginning with "color harmony" as the most important feature of a well-considered garden. The comprehensive index at the end of the book makes the subject matter quickly available for reference. A complete chapter is given up to "Notes on Some of the Newer Gladioli." The book is published by Charles Scribner's Sons, New York, and the price is \$2.00.

We learn that Arthur Cowee has been elected Member of Assembly. We are in doubt whether to extend our congratulations or condolences as the material advantage of a public office to any man is questionable. Anyway, we are not surprised that a man of Mr. Cowee's pleasing personality should be popular enough to be elected and have no doubt but what he will do honor to the office.

In the absence of evidence to the contrary we believe that the best storage place for Gladiolus corms is a cellar and that the cellar should not have a furnace in it. In other words, the temperature of a good potato cellar is a good place to store Gladiolus corms after they are well cured in the field.

Gladiolus Society of Ohio.

The adjourned meeting of the Gladiolus Society of Ohio was held according to appointment in the Hollenden, Cleveland, Ohio, Nov. 12, 1915, President Betscher in the chair. C. B. Gates, Mentor, Ohio, was elected President, Joe Coleman, Lexington, Ohio, Vice President, and Wilbur A. Christy, Warren, Ohio, Secretary and Treasurer.

Report of Treasurer showed a good balance in the treasury. After an extended consideration of the proposition received from President Fairbanks, of the American Gladiolus Society, in regard to a joint exhibition by the two societies, it was decided to be inexpedient at the present time to undertake such an exhibition.

The time and place of the next Flower Show were fixed, subject to any necessary revision by the Executive Committee, to be, as before, at the Hollenden, Cleveland, Ohio, on the Friday and Saturday nearest to the 15th of August, 1916, and the Secretary was instructed in the preparation of the premium list for this exhibition, to disregard the distinction between Amateur and Professional, thus placing all on equal terms.

Adjourned until regular meeting at next Annual Flower show.

WILBUR A. CHRISTY, Sec. and Treas.

Pink Perfection.

[Subject of illustration on front cover page.]

That *Pink Perfection* is a fine thing could hardly be disputed. It captured a First Class Certificate at both London and Haarlem in 1913. While not as yet generally distributed in this country it appears to have the stamp of approval of those who have grown it. The flower is fairly large to very large, closely set on a three foot spike. A well-grown spike carries upwards to twenty buds with six to eight flowers out at one time. Nearly all the buds show color at the same time and resemble pointed rose buds, a grand characteristic indeed. Three flower stalks of *Pink Perfection* will make quite a bouquet and a better showing than a dozen of some varieties. Its somewhat crooked growth adds a graceful charm and is not a fault to this variety.

In color a bright pink bordering on salmon. Mid-season bloomer and for exhibition purposes should be planted early. It is healthy and a good propagator.

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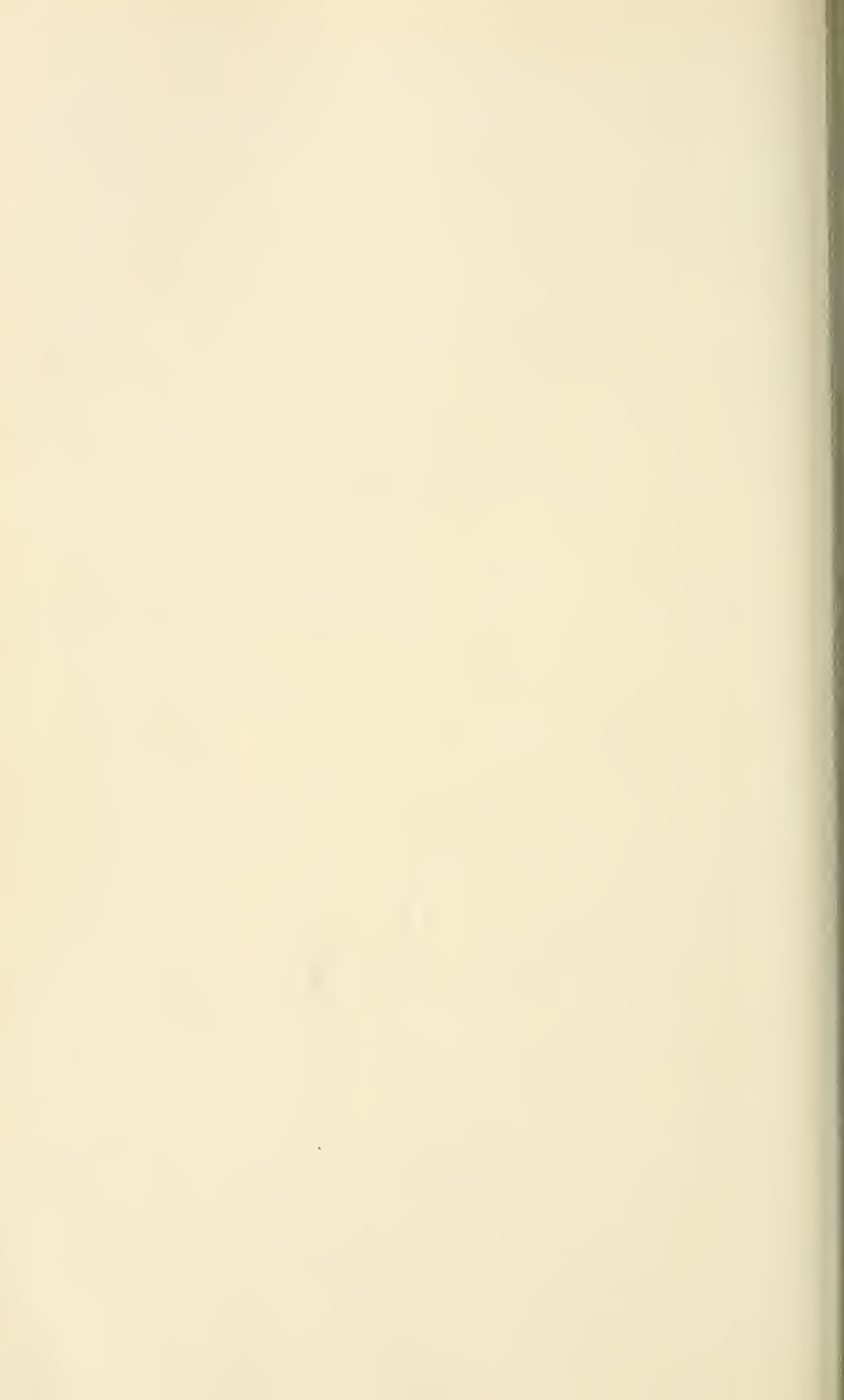
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THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.

Published Monthly by Madison Cooper, Calcium, New York.

Vol. III.

JANUARY, 1916

No. 1



GLADIOLUS—WAR.
(For description see page 4.)

Ruth and the Gladiolas.

Ruth always did like flowers. And I believe that like me, she considers the Gladiolas about the finest of the lot. They are so gay and bright and so sturdy and clean and upright and independent and cheerful, that they are the ideal flowers.

I have several acres of them down in the big fields, but this picture was taken in my private garden right between the house and the seedhouse. I have a special garden of Gladiolas there about fifty feet square, where I have all my special choice seedlings and rare varieties, and samples

Niagara and *Panama*, the best yellow and the best pink, are in full bloom now and are glorious. You must have them by all means. And *Peace* is just opening. That is another you must sure have next year. Pure white except for a slight violet penciling in the throat, very large, wide open, and five feet high.

Halley is one of the first to bloom, and is a delightful color. Soft salmon pink, large, graceful, and bright. It has never been pushed as it deserved. *Princeps* still holds its place as the biggest, deepest red. Glowing scarlet with white stripe, six inches wide or more, and looking



Ruth and the Gladiolas.

of all the standard varieties besides. It's a wonderful place, and I put in a great many hours there nearly every day. Ruth likes to follow me around and look at the flowers too, but she never picks any or bothers them herself. Sometimes I will cut an extra fine spike and let her carry it to mamma, and then she feels very proud and important, as you will notice in this picture.

The row at the left of the picture is a new variety called *Willy Wigman*, which I imported from Holland this year. It is wonderfully fine and I will probably list it in the catalog next spring. It is creamy white with a scarlet blotch in the throat, and grows very tall and strong. Ruth is no runt, and you will notice they are away above her head.

more like a giant scarlet amaryllis than a Gladiolus. And there are dozens more. *Europa*, the big, pure white, *Shenandoah*, the big, stately red, *America*, and *Mrs. Francis King*, and the old *Brenchleyensis*, and all the rest of them.

I pretty near forgot to mention the mixtures. I have a big block of the mixed ones, and I don't know but what I take more pleasure in them than I do in the named sorts. You never can tell what is going to open next. No two alike. Something new every time you go to look at them.—From Henry Field's "Seed Sense."

[Mr. Field prefers to spell Gladioli in the old fashioned way, and we have not dared to correct him in this case. As we have before pointed out, "a rose by any other name would smell as sweet."—ED.]

Connecticut Fair Association.

LIST OF AWARDS FOR 1915

BY JAMES M. ADAMS.

THE exhibit of Gladioli at the Connecticut Fair, at Charter Oak Park, Hartford, Ct., Sept. 6th to 11th, was the largest in number of entries and far superior in quality to any previously given. Besides those entered for prizes were several large entries for exhibition only, John Lewis Childs making a very large showing. The large building, covering perhaps an acre and one-half, was one mass of beauty—Gladioli predominating, with dahlias a good second in number, and every other conceivable variety of flowers in bloom at the time of the exhibit, in fact, Horticultural Hall was the feature of the big fair, the attendance on the opening day being over 75,000. Gladioli are growing rapidly in favor in Connecticut, and next season bids fair to see a much larger area given to the growing of those beautiful flowers.

While I regret that all classes were not filled, I trust the growers who so generously donated prizes this year may favor the fair association with offers for the fair of 1916. All such offers may be sent to James M. Adams, care *Hartford Times* Office, Chairman of the Connecticut Horticultural Society's Publicity Committee. A list of such offers will be printed in the papers by March 15, 1916, giving growers a chance to buy bulbs so as to compete in various classes.

I desire in the name of the Society to heartily thank those who so kindly favored us with donations for the fair of 1915.

Following is the list of winners of the special premiums:

OPEN TO AMATEURS ONLY.

E. E. STEWART, Brooklyn, Mich.

For best display named varieties of Gladioli, shown by an amateur—1st, 12 bulbs *Michigan*, won by Arthur R. Adams, 466 Franklin Ave., Hartford, Ct.; 2nd, 12 bulbs *Black Beauty*, won by A. Righenzi, 22 Barnard St., Hartford Ct.

H. E. MEADER, Dover, N. H.

For best 6 spikes of *Baron Hulot*—12 bulbs of *Jean Dieulafoy*, won by Nelson E. Smith, East Hartford, Ct.

RALPH J. BRUCE, Longmeadow, Mass.

For best 12 spikes of *America*—25 bulbs of choice mixture, won by F. R. Briggs, Box 660, Manchester, Ct.

HENRY YOEUELL, Syracuse, N. Y.

For best vase of *Princeps*, 5 spikes—12 bulbs of *Contrast*, won by A. Righenzi, Hartford, Ct.;

best vase of White, any variety, 5 spikes—12 bulbs *Pride of Goshen*, won by A. Righenzi, Hartford, Ct.; best vase of Yellow, any variety, 5 spikes—12 bulbs *Wild Rose*, won by H. E. Cowles, 68 Standish St., Hartford, Ct.

G. D. BLACK, Independence, Ia.

For best 6 spikes of *Golden King*—1st prize, 12 bulbs of *Hiawatha*, won by Arthur R. Adams, Hartford, Ct.; 2nd prize, 12 bulbs of *Chocolate*, won by H. E. Cowles, 66 Standish St., Hartford, Conn.; 3rd prize 12 bulbs of *Mahogany*.

F. E. SWETT & SON, Stoughton, Mass.

For the best 6 spikes each of *Blue Jay*, *Europa*, *Panama*, *Niagara*, *War* (by an amateur)—1st prize, \$5 worth of bulbs; 2nd prize, \$3 worth of bulbs; 3rd prize, \$2 worth of bulbs, to be selected from catalogue. Not filled.

L. MERTON GAGE, Natick, Mass.

(Open to amateurs only)—For the best 3 spikes of *Mrs. Frank Pendleton*—1st prize, 12 bulbs of *Mrs. Frank Pendleton*; 2nd prize, 6 bulbs of *Mrs. Frank Pendleton*. Not filled.

L. MERTON GAGE, Natick, Mass.

For best display of 25 spikes, named or unnamed varieties—1st prize, 25 bulbs of Gage's *Sunnyside* mixture, won by Arthur R. Adams, Hartford, Ct.; 2nd prize, 25 bulbs of Gage's Hybrid seedling Gladioli, won by Nelson E. Smith, East Hartford, Ct.

A. N. PIERSON, Cromwell, Conn.

Best vase dark Pink, any variety—1st prize, 25 bulbs of *Pink Beauty*; 2nd prize, 25 bulbs *Princeps*, won by A. R. Adams, Hartford, Ct. Best vase of Lilac, Lavender or Blue, 5 spikes in all, 25 bulbs of *Wild Rose*, won by A. Righenzi, Hartford, Ct. Best vase of any unnamed seedling variety, 5 spikes, 50 bulbs of *Brenchleyensis*. Not filled.

A. H. AUSTIN CO., Wayland, Ohio.

For the best 6 spikes of *Summer Beauty*, 15 bulbs of the new variety, *Herada*, won by A. R. Adams, Hartford, Ct.

M. CRAWFORD CO., Cuyahoga Falls, Ohio.

For the best collection of unnamed seedlings—12 bulbs of the new White variety, *Theodosia Grant*. Society also awarded an extra special for excellent quality of color of seedlings, won by J. M. Adams, 466 Franklin Ave., Hartford, Ct.

W. W. WILMORE, JR., Wheatridge, Col.

For best 6 spikes of *Harwinton* and 6 spikes of *Dr. Goodwin*—1st prize, 24 bulbs of *Mrs. Frank Pendleton*, won by Arthur R. Adams, Hartford, Ct.; 2nd prize, 24 bulbs of *Master Wietze*, won by H. E. Cowles, Hartford, Ct.; 3rd prize, 24 bulbs of *Willy Wignan*.

STUMPP & WALTER CO., N. Y.

Silver Cup for best collection, 10 named varieties, 3 spikes each, won by Arthur R. Adams, 466 Franklin Ave., Hartford, Ct.

J. A. EDMAN, 163 Pleasant Street, Orange, Mass.

For best vase of 12 spikes, any variety—25 bulbs

of *Kunderdi Glory*. For best vase of six spikes, any variety—25 bulbs of *Halley*, both won by A. Righenzi, Hartford, Ct.

A. W. GARDINER, 14 Lyndale St., Springfield, Mass.

For best display *Mrs. Francis King*—12 bulbs of *America*; for best display of the new *Gladiolus Forest City*—12 bulbs of *Niagara*. Not filled. For the best display of *Mrs. Frank Pendleton*—12 bulbs of *Europa*, won by A. R. Adams, Hartford, Ct.

BIDWELL & FOBES, Kinsman, Ohio.

For best vase of *Panama*—25 bulbs of *Panama*; won by A. R. Adams, Hartford, Ct. For best vase of *Niagara*—25 bulbs of *Niagara*, won by N. E. Smith, East Hartford, Ct.

OPEN TO ALL.

M. F. WRIGHT, Fort Wayne, Ind.

For best display of *Rosebud*—12 bulbs of *Rosebud*, value \$5. Not filled. For best display of *El Capitan*—one dozen *El Capitan*, value \$2.50, won by Clark W. Brown, Ashland, Mass.; for best display of Red Canna, one dozen Red Canna, value \$1, won by Clark W. Brown, Ashland, Mass.

WILBUR A. CHRISTY, Warren, Ohio.

For best 12 spikes or more of *Rose Queen*, 50 bulbs *Rose Queen*; for best 12 spikes or more of *Orient*, 50 bulbs *Orient*; for best 12 spikes or more of *Mapleshade*, 50 bulbs of *Mapleshade*; for the best 12 spikes or more of *Ophir*, 50 bulbs of *Ophir*. Not filled.

JOHN LEWIS CHILDS, Flowerfield, L. I., N. Y.

For the best selection of Gladioli in 6 varieties, 6 bulbs each of *Winsome*, *Charmers*, *Dazzler*, *Enchantress*, won by E. M. Smith, E. Hartford, Conn.

W. E. KIRCHHOFF & CO., Pembroke, N. Y.

For best display of *Princepine* (Kirchhoff's), 100 bulbs of *Glory of Holland*, won by Clark W. Brown, Ashland, Mass.

B. F. WHITE, Terryville, Conn.

For best new seedling, 100 bulbs of *King Philip*, value \$25, won by Clark W. Brown, Ashland, Mass. For the best new White variety, 5 spikes, one dozen *September*, value \$10. Not filled.

JOE COLEMAN, Lexington, Ohio.

For best 12 spikes of *Golden King*, 100 bulbs of *Ruffled Glory*, won by E. M. Smith, East Hartford, Ct.

C. BETSCHER, Canal Dover, Ohio.

For best collection of 10 varieties, 6 spikes each, first prize, 100 bulbs *Primulinus Hybrids*, won by E. M. Smith, East Hartford, Ct.; second prize, 50 bulbs of *Primulinus Hybrids*; third prize, 25 bulbs of *Primulinus Hybrids*; fourth prize, 13 bulbs of *Primulinus Hybrids*. For best collection of 5 varieties, 6 spikes each, to be different than the 10 varieties; first prize, 15 bulbs of *Primulinus Species*, won by Clark W. Brown, Ashland, Mass.; second prize, 10 bulbs of *Primulinus Species*. For best display of Gladioli (effectiveness to govern), designs, baskets, table decorations, etc., first prize, 12 peonies, value \$12; second prize, 6 peonies, value \$6; third prize, 3 peonies, value \$3. Not filled.

WILLIS E. FRYER, Mantorville, Minn.

For best 6 spikes of *Mrs. W. E. Fryer*, 12 bulbs of *Mrs. W. E. Fryer*, won by Clark W. Brown, Ashland, Mass. For best 12 spikes of *Kunderdi Glory*, 12 bulbs of *Mrs. W. E. Fryer*, won by J. M. Adams, 466 Franklin Ave., Hartford, Ct.

A. E. KUNDERD, Goshen, Ind.

For best display of *Kunderdi* type Gladioli—1st prize, 12 bulbs of *Mrs. Frank Pendleton*, won by J. M. Adams, Hartford, Ct.; second prize, 12 bulbs of *Summer Beauty*, won by Clark W. Brown, Ashland, Mass.; 3rd prize—12 bulbs of *Kunderdi Glory*.

MUNSELL & HARVEY, Ashtabula, Ohio.

For the best vase of Red, 12 spikes—25 bulbs of the new red *Gladiolus Hazel Harvey*, won by Clark W. Brown, Ashland, Mass.

W. A. BURPEE & CO., Philadelphia, Pa.

For best display of Gladioli from bulbs purchased from Burpee & Co.—1st prize, \$3, won by Mrs. William Clark, Rockville, Ct.; 2nd prize \$2.

JACOB THOMANN & SONS, Rochester, N. Y.

For best 6 spikes of any White variety—1st prize, \$5, won by E. M. Smith, East Hartford, Ct.; 2nd prize, 25 bulbs of *Rochester White*.

WEEBER & DON, Chambers St., New York.

For best display of *Primulinus Hybrids*, \$5. Not filled.

THE MODERN GLADIOLUS GROWER, Cal-cium, N. Y.

To the winner of the largest number of prizes on Gladioli at the fair—1st prize, life subscription to THE MODERN GLADIOLUS GROWER; 2nd prize, 5 year subscription to THE MODERN GLADIOLUS GROWER; 3rd prize, 3 year subscription to THE MODERN GLADIOLUS GROWER. Won by Clark W. Brown, Ashland, Mass., A. R. Adams, Hartford, Conn., and A. Righenzi, Hartford, Conn.

VAUGHAN'S SEED STORE, 33 W. Randolph Street, Chicago, Ill.

For best display of *Mrs. Francis King*—1st prize, 12 bulbs of *Chicago White*, won by E. M. Smith, E. Hartford, Ct.; 2nd prize, 12 bulbs of *Margaret*, won by Clark W. Brown, Ashland, Mass.

The Fair Association offered cash prizes for best displays both in the Amateur and Professional Classes.

Gladiolus—War.

Majestically it stands a veritable king among Gladioli. *War* in regal splendor towering almost six feet high, represents the very best among the dark red varieties. Strong, erect, vigorous, makes it of easy culture, and under good growing conditions reaches the extreme height as mentioned above. The flowers are of good size, petalage of rounded form and of excellent texture; spike strong and straight. In color a deep blood red, shaded to a crimson black, but without decided markings. Corms should be planted early for exhibition purposes as its period of bloom is medium late. *War* is a prolific producer of small cormlets.

MRS. AUSTIN'S TALKS FOR AMATEURS.

HOW CAN I SELL MY GLADIOLI?

I want to sell my Gladiolus bulbs. I am unknown to professional florists, bulb growers, and those interested in selling bulbs through catalogues. I know of no trade papers through which I can bring my bulbs to their notice, and there seems to be no demand for Gladioli. How can I sell them? This was the question that confronted me many years ago. I had been growing Gladioli a few years for pleasure and from experience knew them to be good, strong bulbs that would produce good blooms, and that the varieties were the best to be had at that time. They had increased well and I had a surplus but we needed the room in the garden plot for more staple products, and they were in the way in the cellar through the winter. I gave some away but my friends were not enthusiastic over them for Gladioli were not popular, not the fashion, so I had to sell them or dispose of them in some way. I felt I could not destroy them, and I would like that extra pin-money. I thought there surely must be some people who would love and appreciate them as I did, but I knew not how to reach them. One day I decided that I would find those people in some way and just "would sell those bulbs." The decision was a relief; I felt quite light hearted, and almost as if there were plenty of sales in sight. It was really half the battle. My first effort was to induce some boys to try selling them, but people preferred other flowers and they met with failure. Those boys have a warm place in my heart, and not long ago one of them, now a prosperous business man of Cleveland, called and expressed his pleasure and congratulation on the success we have achieved in our Gladiolus business. The next venture was through the Ladies Society of our village church which had planned a Chrysanthemum show and I with others was to have an exhibit, and I planned to show Gladiolus bulbs also. The different exhibits of Chrysanthemums were kept separate but I arranged to have a pretty booth that would attract attention. Here I displayed in pyramid form several hundred of beautiful large smooth bulbs each looking as if it was varnished. I gave to each caller a printed slip describing, and giving reasonable prices of the varieties I wished to sell but soon noticed that many of the slips were thrown away. I did not like that, those

slips had cost money and I wanted them to be read. Having some extra chrysanthemums taken there to sell I decided to use them to induce people to read them, and offered one good sized bloom or a spray of small ones to all who would promise to keep the slips and read them carefully. And now a word about those slips, for never was anything more anxiously or thoughtfully written. Realizing that I had no other way of bringing a mental picture of the blooms to the reader, I described minutely and accurately the form, colors and markings that had most attracted me, in each variety. Often there are markings that are apparently unnoticed, at least not mentioned, which, by their contrast serve to bring out the brighter colors of the blooms, but the average description mentions only the bright colors. For instance Gladiolus *May* is usually described as "white flaked crimson" with no mention of the dainty brown marking on the lower petal which serves the same purpose as the velvet band worn by Miss Debutante who well knows that by the striking contrast her throat shows snowy white.

I still think accurate description very important, for while the grower may know the colors of a variety he should not take it for granted that others do. In speaking of the well known Gladiolus *America* we are often asked what its color is. The prospective buyer must have a fairly good mental picture of the variety. It is not the name but the flower that creates the demand, but of course a good name is of importance. Do not disappoint your customer, have the flower all and more than you described. If you have won him, now keep him. Those slips brought a few local orders and one day came an inquiry from a distant state where some one of the slips must have found its way. This inquiry was answered promptly, mentioning the quality and reason for selling, with a discount price for entire lot. The order came, we packed the bulbs neatly having first added a number of extras, and in return received the check and a letter in which it was plain to be seen that the writer had been doubtful about the wisdom of ordering from an unknown grower, but was well pleased with the bulbs.

The next summer we learned of a party not far distant who was growing Gladioli and called there in the blooming season. We found very beautiful varieties in mixture, mostly seedlings, and while there fortunately learned of a Florists' Trade Paper still in its infancy, and through its columns again sold the surplus. I was delighted with that Trade Paper

and literally devoured it weekly (am glad to say that I enjoy it now as much as ever.) At last I had found a way to reach those who understood the value of flowers. I scanned its pages eagerly for Gladiolus notes and advertisements of which there were few for even the Florists did not appreciate them, but I reasoned that if other flowers were worth buying so ought Gladioli to be, and would if the public would learn to know them and use them. I pressed this point in answering all inquiries and believe that many of those early orders were from people who tried them out of pure curiosity and as a new venture.

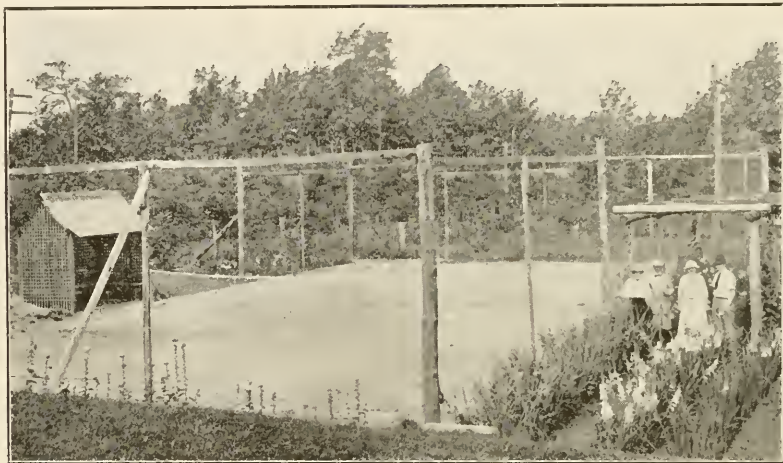
To answer, if possible, each inquiry with the same interest that we did the first one of years ago.

To never forget that there are many people who need to be taught the value and beauty of the Gladiolus.

MRS. A. H. AUSTIN.

Prices for 1916.

The indications are at this writing that the prices of Gladiolus corms for the coming planting season are likely to average much higher on the common varieties than last year. While there is a natural tendency for prices to equalize based on



A Rustic Setting for Gladioli—Estate of Joseph Horner, Grand Rapids, Mich.

Inquiries were beginning to come better, the public everywhere seemed to be slowly and surely learning of the Gladiolus and its possibilities. My husband became interested and we found more room in the garden plot. Those Chrysanthemum shows were held yearly for ten years each better than the year before; they drew good crowds and we exhibited Gladiolus bulbs at them all. As we preferred selling at wholesale the Trade Paper was our greatest sales medium.

We adhere to our rules of long ago:—

To give accurate but not exaggerated descriptions of varieties.

To do better by our customer than he expects.

To advertise steadily and truthfully.

To learn the needs of the inquirer and to assist him, especially if he is a beginner, in his selection. We often know his requirements better than he himself does.

the fact that meritorious varieties are increasing in quantity from year to year, yet prices were so low last year that they were below cost of production, and, therefore, the coming season will see prices average higher on better known varieties like *America* and *Mrs. Francis King*. It is even hinted that some of the most popular varieties which are still rather high in price are likely to be sold out early and prices advance before planting season. Improved business conditions the country over will also have an influence by increasing the demand, and, therefore, those who are tempted to quote low prices because they have a rather large stock should be in no hurry to dispose of their surplus. We are not trying to prognosticate nor guess at the market in advance, but only report what we hear is the actual situation.

MADISON COOPER.

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
PUBLISHED MONTHLY ON THE FIRST OF THE MONTH BY
MADISON COOPER, CALCIUM, N.Y.

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Special favors to none, and a square deal to all.

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Subscription Price
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Growers are invited to contribute articles or notes over their own signatures, but the Editor reserves the right to reject anything which in his judgment is not conducive to the general welfare of the business.

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Vol. III.

January, 1916

No. 1

Low Price of Cut Gladioli.

Forced Gladiolus Bloom.

The prices which have been realized for cut Gladiolus bloom during the past season have been reported as being the lowest on record in the Chicago market and we also understand that in other places prices have been unprecedentedly low. The reason for this has not been given. It is doubtless partly because of a much larger planting of Gladioli than in former years, as the Holland growers disposed of a great volume of their stock here, their other outlets for trade being largely closed. The low prices prevailing induced heavy planting and hence a surplus of bloom was secured. Depressed business conditions also doubtless had much to do with a comparatively slack demand.

As a matter of suggestion and caution, we beg to advise those who contemplate growing Gladioli for cut flowers for market to move cautiously and start in the business in a small way first. A large quantity often produces a glut which is disastrous from a business standpoint. While the Gladiolus is gaining in popularity very rapidly, yet the bulk of the people are not yet familiar enough with it to understand its merits and real worth. Hence, we advise caution.

At the Fourth National Flower Show to be held at Philadelphia, Pa., March 25th to April 2nd, 1916, prizes are offered by the Society of American Florists and Ornamental Horticulturists for forced Gladiolus blooms. There has been so little interest by Gladiolus growers in the past in these early shows and so little real display of bloom that it seems hardly worth while to print the list of prizes. Any one interested can address Henry Youell, Secretary American Gladiolus Society, No. 538 Cedar St., Syracuse, N.Y.

Those growers having greenhouses would perhaps do well to make an attempt to force Gladioli for early spring bloom. Some of the florists do this, but how successfully we are not advised. Also, there seems to be considerable bloom available from the South as early as April 1st, but this would not qualify under the specification, "forced bloom."

As we have already pointed out, it would seem that if strong, young Gladiolus corms were cold stored through one summer (instead of being planted in the spring at the regular time) and planted in greenhouses in December or January that good bloom could be had by March or April. We made an attempt along this

line, but our experience was a failure as the temperature at which the corms were carried was so low as to spoil their germinating qualities. They were, in fact, carried below 30°F., which apparently chilled them to the verge of freezing and practically all were killed. A temperature of 35 to 38° would be plenty low enough for an experiment of this kind and the suggestion is offered, hoping that those interested will make the trial.

MADISON COOPER.

It has been suggested that reports of the Gladiolus shows should give the names of varieties winning prizes. This suggestion is a good one and it should be acted upon. We regret that more care is not used in reporting flower shows and, personally, we have promised ourselves that the next show we attend will be reported more fully. Secretaries of societies reporting shows should see to it that the varieties winning prizes are given in all cases.

Amateur and Professional.

We have in hand communications from ex-President I. S. Hendrickson and ex-President Montague Chamberlain of the American Gladiolus Society commenting on this subject and offering suggestions as to classification of exhibitors at flower shows. These will appear in our February issue and we request those who have suggestions for a solution of this problem, especially as to the proper classification of all exhibitors at Gladiolus flower shows, to write such suggestions in the form of a short letter or article of not more than 400 or 500 words, and we will print these communications in the form of a symposium on the subject.

It is our intention to give every one a chance to express his ideas with a view of assisting toward a better classification of those who show their flowers in public. While we are not satisfied that the correct solution has been found, yet it would seem that we are on the direct road to such a result. Certainly there should be

no disposition on the part of the professionals to not properly encourage the amateurs to exhibit at the yearly shows of the various societies.

MADISON COOPER.



A Single Spike of Gladiolus War.

We have been apologizing from time to time for not printing matter which has really been urging to be printed, and this month we have the same old excuse, but we are making a positive promise this time that more pages will be added for the February issue.

WAYSIDE RAMBLINGS.

A QUESTION OF NOMENCLATURE.

I have grown *Abbe Roucourt* procured from the originator in France and also *Faust*, procured from Mr. Cowee, and can say with certainty that they are not the same as stated by Mr. Errey in the October issue of THE MODERN GLADIOLUS GROWER. The mistake he makes is not surprising and the Holland growers are responsible for it as they have (or several of them have) listed a bulb for some years as *Faust* which is not Cowee's *Faust* at all but which is identical with *Abbe Roucourt*. The latter flower grows with slender stem and with blooms attached to stalk much like many of Lemoine's seedlings and with quite a droop. Cowee's *Faust* grows strong and erect with blooms well set on the stalk and with an entirely different appearance. The color is much the same, the dark crimson and almost magenta base flushed and mottled at the edges with a deeper shade. I have found one instance where a Holland grower really furnished Cowee's *Faust* but the buyer thought an error had been made and asked me to identify what he had got. I have grown in one year, obtained from different sources, *Faust*, *Harvard*, *George Paul* and *Abbe Roucourt*, but had them give me blooms exactly alike, but I have always kept Cowee's *Faust* separate and am sure that anyone who grows it side by side with the *Faust* generally sold under that name will see a great difference. I believe Mr. Errey makes another error by calling *Faust* a Groff seedling as Mr. Cowee does not credit *Faust* to Mr. Groff in his catalogue. Last summer I called Mr. Groff's attention, however, to the facts I have above stated and he agreed with me that he had found the *Faust* generally sold in Holland under that name was not the one sold by Mr. Cowee. A recently issued Holland list put the word (*Bleriot*) after the word *Faust* indicating that they were one and the same. F. S. MORTON.

EXPERIENCE WITH BADENIA WANTED.

I would like to know the experience of any one who has had success with *Badenia*. It has been a dismal failure with me. What soil is best and what location? My soil is clay. Does *Badenia* require very sandy soil and what fertilizer should be used and how applied?

I have had grand success with *Europa*, however, and I hear some say it is weak. It is not with me in my clay soil.

B. F. STALNAKER.

LABELING GLADIOLI.

In the August and September issues of your magazine I have read what is said to prevent the mixing of bulbs.

A few years since, I purchased a small font of rubber type and pad of indelible ink, the whole costing \$1.50.

The name of the variety can quickly be set up in the type holder, and then printed on a ten inch label, which is then tacked on a one inch square stake fifteen inches long, these stakes are driven into the ground until they are well settled.

This printed label is easily read and at digging time can be quickly separated from the stake and tied up with bulbs.

While the name is in the type holder, paper sacks can be printed for using when the time comes for disposing of bulbs. It is quite annoying when you purchase bulbs to find the names, written with a pencil, almost faded out.

If I were a large grower of bulbs, I would purchase from the rubber stamp firms, what they call one line mould stamps, costing ten cents each, and save the time of setting the type in the holder. These stamps would do service for a number of years.

I feel sure that any grower giving the above method a trial would be pleased with the result. CHAS. A. REESER.

COMPARATIVE TEST OF AMERICAN GROWN VS. EUROPEAN GROWN GLADIOLUS CORMS.

Last winter we had some correspondence with an expert horticulturist and tried to sell him some Gladiolus bulbs, and finally he wrote us he had given an order for Holland bulbs. We then offered to furnish him some of our bulbs for comparison, and have just received his report on the flowers.

The varieties he imported were 100 each *Halley*, *Pink Beauty*, *Glory of Holland*, *Orion* and *America*, the *Pink Beauty* being first size and the others second size bulbs.

The varieties we sent him were all second size, 100 each of *America*, *Mrs. Francis King*, *Independence*, and 50 each of *Minnesota*, *Taconic*, *Velvet King* and *Chicago White*.

The following is the report in detail:

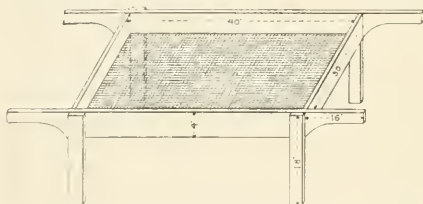
	500 M.&H. Imp.	500 M.&H. Imp.	100 Am. M.&H. Imp.	100 Am.
Average circumference, inches.....	4.28	4.68	3.7	4.5
Total weight, ounces....	262	302	40	51
No. flowers produced....	462	447	100	70
No. flowers marketable..	415	318	96	56
% of flowers marketable..	90	71	96	80
% of bulbs producing marketable flowers..	83	64	96	56

"The above is the result of a test of 500 second size bulbs obtained from Munsell & Harvey with 400 second size and 100 first size imported bulbs. As the varieties were not identical in every case, the per cent of marketable flowers may be the best means of comparison. Included in this test were 100 *America* from each source, which are tabulated separately. The superiority of the Ohio grown bulbs of Munsell & Harvey is too obvious for comment. The bulbs were planted side by side in double rows and received exactly the same treatment."

The gentleman writes us: "Were it not for the fact that *Halley* and *Glory of Holland* send up two stalks on many bulbs, the imported bulbs would have fallen down much worse. The *Glory of Holland* were sent and labelled as *Chicago White*."
J. F. MUNSELL.

GLADIOLUS HARVESTING TRAY.

I am sending you herewith a drawing of a bulb screen which I use in harvesting my Gladioli. Four of them were used and found very handy and labor savers. The idea is to drop the bulbs in the screen after the tops are cut off and the screen being raised off the ground allows a free



circulation of air which dries them much faster than when laid on the ground. It also saves handling the second time. The screen is $\frac{1}{8}$ " mesh, and the tray can be shaken by two men to free the bulbs of dirt. This size will hold over 1,000 two inch bulbs and when they are dried sufficiently, can be carried to the storage room or loaded on a wagon. The wagon if rightly constructed will hold four such trays.
T. H. FULLER.

ORIGIN OF VARIETIES.

Answering in part Mr. Stalnaker's questions as to varieties I will say that I have had the following correct from the parties named:

1. *Empire*, E. E. Stewart.
2. *Heliotrope*, Dreer, (French?)
3. *Azure*, E. E. Stewart.
4. *Deuil de Carnot*, Dreer, (French.)
5. *Jean Dieulafoy*, Cowee (and Woodruff.)

6. *Charlemagne*, Dreer.

7. *Badenia*, P. Hopman & Sons.

8. *Gretchen Zang*, originated by Mrs. Austin.

9. *Daytona* is advertised by Cowee and is probably his.

I have an impression that many of the French sorts are from Lemoine & Sons, Nancy, France. I think Mr. Larrowe imports a number of them, as I had several French sorts from him for trial.

I have, of my own growing, Nos. 1, 2, 4, 5, 6 and 8. GEO. S. WOODRUFF.

P. S.—*Charlemagne* is a magnificent thing and I had some immense spikes at the time of the Iowa State Fair. *Heliotrope* is a much richer blue than *Baron Hulot* but may not be as strong. The stem is slender. *Jean Dieulafoy* is quite similar to some other varieties and I think has often been sold mixed.

NAMES OF GLADIOLUS GROWERS.

TO THE EDITOR:—

Answering a portion of query made by B. F. Stalnaker in December issue:

The varieties *Daytona*, *Lavandula* and *Empire* are Groff's Hybrids, grown by me, the last mentioned variety having not yet been catalogued on account of the limited quantity and high price (\$4.00 per corm). Although listed under that name there is none of the true variety *Empire* in the hands of any other United States grower.

Jean Dieulafoy originated with V. Lemoine & Son, prior to 1897. This variety is also grown here. There has been considerable stock offered by growers which is not genuine. I know this by experience with some purchases made last spring.

Armenian, bred by V. Lemoine & Son about 1896.
originated about by

<i>Deuil de Carnot</i>	1894	V. Lemoine & Son
<i>Le Verrier</i>	1904	" " "
<i>Heliotrope</i>	1905	" " "
<i>Azur</i> (not <i>Azure</i>)	1906	" " "
<i>Charlemagne</i>	1906	" " "
<i>Astarte</i>	prior to 1907	" " "

Chamont (lilac, shaded with purple) was bred by Kelway & Son previous to 1906. This last mentioned variety I am not sure of but this is the record I have.

ARTHUR COWEE.

American Gladiolus Society.

The American Gladiolus Society will hold its seventh annual meeting and exhibition in Boston next August. The vote of the members, recently taken by mail resulted as follows: Boston, 56; Cleveland, 12; Rochester, 9. A number would have favored Rochester if an earlier date could have been arranged.

H. YOEELL, Sec'y.

Roses—Fragrant and Otherwise.

I was quite interested in Mr. Reading's article, page 175, December issue, 1915. While we grow a few roses ourselves, we are small growers compared with specialists near us. There are few roses on earth with any claim to good points that are not tried out here.

For years we have looked for the really hardy and strong growing tea rose with the fragrance of *Testout*, *Chatenay* or *La France*, and we are still looking. Fragrance is certainly an important point, I might say a more or less "strong" one, but our really best bedding and cutting hybrid teas are lacking it almost entirely. They are not entirely without fragrance but they have none as compared with the sorts mentioned above. In this class I prefer *Freiherr Von Marschall*, deep carmine, almost crimson, late in season, *Mrs. B. R. Cant*, *Salmon Rose*, a fine late bloomer, *Wm. R. Smith*, creamy white with pink shadings, *White Maman Cochet* and *Pink Maman Cochet* and *Grus an Teplitz*.

Wm. H. Taft makes good growth in the field with us and is fairly fragrant, a splendid pink of fine form and would class with the above. All these are continuous and free bloomers, making from 2½" pots in spring up to strong rooted two to three feet plants, and simply covered with flowers the entire season.

The really fragrant class make about half this growth though blooming all the time. They are more sparse and slender and they refuse to make enough good, hard wood to carry them through the winter without good protection. The best of these here are *Kaiserin Augusta Victoria*, *Mad. Jules Grolez*, *Mad. A. Chatenay*, *Mad. C. Testout*, *Dean Hole*, *Hermosa* and *Bhumenschmidt*. *Paula* is also a good grower, perhaps the strongest yellow.

Mr. Reading selects a good rose in *Mrs. Laing*, easily the best pink, *H. P. Eugene Furst* is as good in red, possibly not as free but continuous till frost.

We have had good success wintering tender roses by burying them entirely where heeled in in sandy soil. They come out green to the tips in the spring.

Many have trouble in wintering the more tender climbers such as *Lady Gay*, *Tauschendschon*, *Dorothy Perkins*, etc. These should be taken from the trellis and laid on the ground. They will winter nicely in this manner. On one large place near here, climbers are used as border for rhododendrons and beds of dwarf evergreens. They are planted about three feet apart and runners strung

along where wanted. *Dorothy Perkins* had been planted longest and we saw runners fully twenty feet long, simply covered with flowers.

Later in the season we saw on this same place a 10 foot, round bed of *Boltonia Asteroides*, edged with aster *St. Egwin*. The *Boltonia* was tightly massed and held up by wires crossed throughout the bed. When in full bloom not a leaf could be seen, simply covered with the white flowers in the centre and beautifully edged with the light pink of *St. Egwin*. This is the most striking planting I have ever seen. When this aster becomes better known it will be in great demand as a two foot border. It is the freest blooming aster in cultivation, the color is a clean, dull pink and, unlike most of its class, it is very orderly in growth. It is invaluable as a border as it blooms to the ground.

R. E. HUNTINGTON.

Peonies.

The retail grower with a nice lot of Peonies in the field will always find them a paying investment. The plants when at all taken care of will increase rapidly. By dividing the large clumps plants can be sold every Spring and Fall without cutting down on the stock intended for cut flower purposes during the months of May and June. All the average Peony wants in order to bring returns is a well drained soil which has been deeply worked over, a dose of stable manure worked into the surface between the plants every year or two, and plenty of cultivation. At present the plants in the field need going over. If you are looking for good flowers, disbudding is in order now. Keep the cultivator going and have the base of the plants free from weeds and grass; when once allowed to become established it is hard to get rid of. Whether you intend using the flowers for home trade or for shipping, they should not be allowed to open up fully before being cut; just as the buds begin to show color is the time to remove from the plants and place in water. Every one will open up nicely and last for quite a few days.—*Florists' Exchange*.

The illustrations of *War* which variety is shown on our front cover page and on page 8 this month are disappointing to us, but they are the best that could be had. *War* is a dark, blood red and the light lines and markings which show in the photographs are not much noticeable in the flower itself.

New Catalogues and Price Lists.

The new illustrated catalogue of Firma P. Vos, Mz., Sassenheim, Holland, is to hand. It contains sixteen pages with cover and is illustrated with some extra good halftones. The varieties listed contain some of the best of American origin as well as a selection of those of European origin. The prices quoted are all in American money and are in quantities of 10, 100, and 1000.

Wilbur A. Christy, Warren, Ohio, has issued his wholesale list of Gladioli for 1916. The standard sorts together with Mr. Christy's specialties are listed, and among others, *Golden Measure*, of which Mr. Christy has considerable stock.

Joe Coleman's wholesale list for 1916 is to hand and it contains a selection of the very best varieties including some of the best Kunderdi. The list is strictly wholesale, prices by the hundred and thousand only being quoted. Mr. Coleman's address is Lexington, Ohio.

The wholesale trade list for 1915-1916, English Edition, of K. Velthuys, Hillegom, Holland, has been received. It is divided into early and late flowering sorts and also into color sections. Novelties for 1916 are listed. Some of the more prominent varieties are given special mention and descriptions from the pages of THE MODERN GLADIOLUS GROWER are used.

The new trade list of P. Hopman & Sons, Hillegom, Holland, contains on the last page an extra fine illustration of the variety *Pink Perfection* which is listed among other well known sorts. In addition to the standard varieties and the European specialties, seedlings and primulinus are listed and special mention made of varieties for cut flower purposes.

The selected varieties listed by Raymond W. Swett, Saxonville, Mass., in his new price list are extra good ones, containing some of the old favorites as well as some of the best new sorts. Mr. Swett also lists dahlias in good assortment.

Clark W. Brown's new catalogue for 1916 just to hand. The varieties are alphabetically arranged, and the brief descriptions are accurate and instructive. Mr. Brown features his special varieties *Mongolian*, *Mrs. A. W. Clifford* and *Mrs. O. W. Halliday* by the use of illustrations and with especially complete descriptions.

The trade catalogue of John Lewis Childs, Flowerfield, L. I., is to hand. It is printed after its usual complete style with many illustrations of some of the best varieties of Gladioli on the market. Some of the new Childs are illustrated and described for the first time.

The wholesale list of A. H. Austin Co., Wayland, Ohio, is to hand. In addition to the standard varieties the specialties of this company are given complete descriptions. These include *Evelyn Kirtland*, *Gretchen Zang*, *Herada*, etc.

M. S. Perkins & Co., Danvers, Mass., are sending out their "Special Offers" retail list for 1916. Some of the very best varieties are priced singly, by the dozen and by the hundred. The list also mentions dahlias, roses, etc.

The wholesale list of G. D. Black, Independence, Iowa, prices all the standard sorts in tens, one hundred and one thousand; also bulblets. A number of varieties not listed elsewhere are given in this list.

W. W. Wilmore, Jr., Wheatridge, Colo., makes special mention of his irrigation grown Gladioli in his new wholesale list for 1916. He divides them into standard varieties, newer varieties and novelties. He also lists dahlias, cannas and other outdoor flowering plants.

Hazel Harvey, the new red being put out by Munsell & Harvey, Ashtabula, Ohio, is among the varieties given in their wholesale list just received. The standard sorts are priced by the thousand only and the newer and more expensive varieties by the hundred.

The 1916 price list of Sunnyside Gladiolus Gardens, L. Merton Gage, Proprietor, Natick, Mass., is to hand. It consists of 16 pages, listing many varieties not common on the market, together with the standard varieties and new introductions. Mr. Gage also lists some good collections of Gladioli.

Westerbeek & Klyn, Sassenheim, Holland, have sent us their new spring catalogue for 1916. It contains 19 pages and in addition to their usual select varieties of Gladioli and mixtures, they list dahlias, peonies, anemone, lilies, delphinium, iris, etc. The prices are given by the hundred and thousand in United States money. The American address is care Maltus & Ware, 14 Stone St., New York.

Gladiolus Tristis.

This Gladiolus, though rare, is valuable owing to its early flowering, for by the middle of April it is generally in full bloom in the southwest, many weeks before *G. Colvillei*, *The Bride*, and the rest of the so-called early section. Last year, a very early season, it flowered at the end of March. It is said to be a native of Natal, but in Devon and Cornwall it is perfectly hardy even when planted only three inches below the surface, and quite unprotected. I have a colony which this year bore over 200 flower spikes. One particularly pleasing attribute of this Gladiolus is that towards the twilight the blossoms are deliciously scented. This Gladiolus increases very rapidly and seeds freely. The strongest flower stems on my plants are over three feet in height and bear from four to five blossoms. In the deep loam of the late Mr. Archer-Hind's garden this Gladiolus grew fully four feet in height. It is sometimes called *G. tristis concolor*, or *G. tristis sulphureus*, to distinguish it from other less desirable forms. When *G. tristis* is ordered nurserymen usually send out a variety with a band of purplish-black stretching up the centre of the three higher petals. This form is far inferior in beauty to the pure colored one here written of. In Nicholson's "Dictionary of Gardening," *G. tristis* is described as having its three upper segments spotted with minute reddish-brown dots, but I have never come across this variety.—WYNDHAM FITZHERBERT in *Gardening Illustrated*.

Pink Perfection

A Lovely Appleblossom Pink

The buds resembling pink rose-buds and 6 to 8 flowers open at once. See cover-page and description in Dec. *Modern Gladiolus Grower*.

One dozen fine bulbs, post-paid, \$1.00.

H. E. MEADER, Gladiolus Specialist, DOVER, N. H.

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YOUR DOLLAR will buy more here—quality and quantity—75 best mixed Gladioli, \$1.00 prepaid. All kinds of high grade seeds, greenhouse plants, potting dirt, labels, etc. One quart mixed bulbs, \$1.00 prepaid. Gladiolus seed, per 100, 15c. PAUL L. WARD, Hillsdale, Mich., Plant Specialist.

GLADIOLUS BULBS—Will sell my surplus bulbs at 25c. per doz. or \$1.50 per 100, these include all varieties as America, Scarsdale, Pink Beauty and a lot of seedlings. Also 6 varieties of Dahlias 25c. All post free. W. H. LECKIE, 4512 No. Racine Ave., Chicago, Ill.

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Derby Gardens Gladioli

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John H. Umpleby, Lake View, N.Y.
R. F. D.

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Willard N. Clute & Co., Joliet, Ill.

HAZEL HARVEY Bloom, medium large, tube curved, stout, long. Segments unequal, connivent; the upper horizontal and broad, the lower reflexed and narrower. Stamen filaments reddish. Anthers violet. Color carmine-red, throat amber-white, pencilled carmine-purple. A good, compact bloom of good, clear color and good substance. Mid-to-medium late season. Spike tall, erect and a free bloomer on both main stem and branches. A vigorous grower and well furnished with broad leaves. Corms, medium large, "increases by division." Cormels prolific. (*Am. Glad. Soc. description*).

Large bulbs, postpaid, 25c. each, \$2 per dozen.

Munsell & Harvey, Growers of Gladioli, - Ashtabula, O.

The Garden Magazine

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THE MODERN GLADIOLUS GROWER

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FEBRUARY, 1916

No. 2



GLADIOLUS—*LILY LEHMANN*.

(For description see page 22.)

The Gladiolus Manual.

By W. W. WILMORE, JR.

CHAPTER IX.

Cleaning and Grading.

AS soon as stock is dry in the fall, cleaning can begin. The old corm is removed by a pressure of the forefinger of the right hand, while the corm is firmly held with the left hand. This operation can be quickly done when one becomes accustomed to the work. It is advisable in cases where large quantities are to be cleaned to wrap the fingers with adhesive tape, this aids in keeping the fingers from getting sore.

The work should be done as follows: First, the stock to be cleaned is turned out on a sieve table of one-half in. mesh and then the stock is thoroughly rubbed over the table to separate the small corms and bulblets which fall through into a large box. This operation also takes off the loose husk and any clinging soil. Care should be taken not to rub too severely because the corm is tender and must not be bruised. The old corm and roots are then removed and the clean stock is put into a large box or any other suitable receptacle after which they are graded.

It is this part of the work with Gladioli where most of the mixtures occur, so care should be taken to always be sure of the name of the variety on which the work is being done. Look carefully for small corms and bulblets in boxes that appear empty before filling with other varieties; be sure the table is clean before starting a new variety; be doubly sure that every box of clean stock is marked with one name only and that the right name.

Stock smaller than one-half to three-quarter inches is seldom cleaned, this size stock when perfectly dry will lose most of their roots on being rubbed over a one-quarter inch mesh sieve which is sufficient for their purpose.

Grading is done by means of different size sieves. The first size are those that remain on a sieve with $1\frac{1}{4}$ inch mesh. Second size corms are those that stay on a screen with one inch mesh. Third size corms are those that remain on a screen of three-quarter inch mesh. Fourth size corms include the remainder except in cases of fifth size which is seldom sold. This size would be the smallest of all corms.

In some cases the virgin stock, which is stock from bulblets or cormels, properly

speaking, is kept separate from that of older corms. These are of more value to the grower than the older stock on account of their greater productive qualities. In all cases, however, the different sizes are kept in separate boxes or flats for convenience in selling and planting as sizes are always planted together.

The hard shell cormels and small corms which fall through the cleaning table are cleaned of the dirt and trash which consists of broken roots, husks, etc., by first sieving with a fine sieve and then fanned by a fanning mill. There are always some small clods of dirt, the size of the tiny corms, that cannot be sieved or fanned out. These are of no consequence except in cases of sale which, if necessary, can be disposed of by washing. The corms can then be spread out on a drying table for a few hours, after which they will be as clean as the larger stock. They are best washed in a sieve by dashing up and down in a tub of water.

The old corms and roots are thrown into a trash box as fast as they are removed and can be burned up in the furnace or hauled away at leisure.

As soon as the work of cleaning is finished no further work is necessary except to get all of a variety together and place the small stock where it will be out of the way until planting time. The hard-shells or cormels are placed in a cool, damp place so as not to allow the coat to get hard and tough which keeps them from starting early when planted. In cases of large quantities of these cormels the writer has been most successful by packing them in galvanized iron barrels made for the purpose. This keeps them damp; smaller quantities are packed in galvanized buckets, the tops being covered so that in case of an accident they will not be spilled out on the floor. Smaller quantities are hard to handle. They should be stored in heavy paper sacks such as the Holland bulb growers use for tulips, narcissi and other bulbs. These sacks are tough and will stand a good deal of moisture without rotting. They can be put into these sacks and packed in barrels. It would not be advisable to follow this method unless one had these heavy sacks and then a provision made for air, because moisture will soon rot

the paper and the valuable stock, which is nearly always the case of small quantities, be badly mixed.

I have had experience along this line and can appreciate what it means to one when he finds that his best stock is in this condition. It is always best for one to use his own judgment as to the best policy to follow, as many of us have made serious mistakes by following the other fellow's advice.

[Continued next month. Chap. X - "Resting and Vitiating Corms."]

Fertilizer Experience with Gladioli.

BY GEO. A. WHITNEY.

In the August issue of THE MODERN GLADIOLUS GROWER I noticed a suggestion that your readers send in their opinions based on their experience with the various fertilizers. At that time I could not report on this season's experiments but now I have all my bulbs dug, dried and cleaned and they all seem to justify the methods used in cultivation.

In the home garden I do not expect bulbs entirely free from disease as it is old ground that has been cultivated continuously for years, yet there were but few diseased bulbs this season. Neither do I expect the largest bulbs, as practically all of them are planted to produce seed or cut flowers. However, nearly all the bulbs dug this season from this garden were over one and one-fourth inch in size and many over two inches.

The plot is approximately one-fortieth of an acre (25 ft. by 43 ft.) and on this I used half a cord of old well rotted manure spaded in to the depth of a foot or more about two weeks before planting time. It was spaded again just before planting and about 25 pounds of pure unleached hard wood ashes raked into the surface. In the rows I used a very little pulverized sheep manure (not over 10 lbs. to the 100 ft. of row) which I covered about an inch deep. The furrows were eight inches deep and about the same in width and the bulbs were planted in triple rows in order to get as many as possible into the limited space. The rows were two feet apart and the bulbs were covered at least seven inches deep, the soil being a sandy loam and underlaid by a fine yellow sand to a great depth, giving it good drainage.

Last season I used on the same ground potato phosphate and bone meal, and the season before only manure and lime, and while the bulbs were satisfactory each

season they were larger and less diseased this year than ever before. One condition, however, may have affected this year's results to as great an extent as the fertilizer and that is the unusual amount of rain. This particular plot of ground being in a warm and protected place and also well drained, the continued rains may have been more favorable than otherwise in producing good bulbs.

At the farm, conditions are different, although the ground there is a sandy loam and well drained. It lies fully exposed to the sun and wind, being on a slight elevation and sloping very gently to the south-east. The ground was furrowed deeply with a plow and old, fine manure (from the cow and horse stables) was scattered along the furrows, a large wheelbarrow load to about 100 feet of furrow. This was covered an inch deep for bulblets and about two inches for bulbs. Bulbs were covered about six inches deep at first and perhaps two inches more added when hoeing. Bulblets were covered a good two inches, possibly a little deeper, and hoed twice, making them finally about four inches deep. Owing to the fact that it rained nearly every day from the second of July until the sixth of August the ground was not cultivated as much as was intended, but it was loosened around the plants several times after the two hoeings. At the time of the first hoeing a little pulverized sheep manure was sprinkled among the plants (not over ten pounds to the hundred feet of row) and the dirt drawn over it. This stimulated them noticeably and I am convinced that its effect continued through the growing season.

Some cut flowers and a little seed was produced from this field but most of the flower stalks were cut as soon as they were fully exposed and the bulbs produced were the largest and cleanest I have ever seen. I have personally sorted all the bulbs produced from this field (about 40,000) and if there is a defective bulb among them it has escaped my notice. The bulblets planted in this plot grew remarkably and I estimate that at least 75% of their product is over one-half inch in diameter and nearly half will go an inch and over.

It is my intention to apply wood ashes with the barn manure next season and apply the sheep manure in the same manner only making two light applications instead of one.

Don't forget about planting some Gladiolus seeds this year. It is worth the expense involved.

MRS. AUSTIN'S TALKS FOR
AMATEURS.

FEBRUARY PLANS.

Own a home. It may be a grand mansion centering a vast estate, or a pretty suburban bungalow and its half dozen acres; perhaps a cosy cottage and a garden plot in a country village; the large old fashioned farmhouse with its acres of hay and grain lands and roomy dooryard; the "just beginning" home with skimpy four room house and bit of land; a Gladiolus ranch in the West where they are just learning the value of both Gladioli and Evergreens. No matter whether the home be large or small, have one of your very own and do not let a season go by without doing something to add to its attractiveness and make it more and more the home of your ideal. You will not only be pleasantly interested while doing it, but will be laying up happiness and contentment for your later years. If you think you cannot afford much outlay, plant the small sizes of plants, trees and shrubs. They grow so fast they will be large before you know it. February is a good time to plan, especially for winter beauty. To be sure your landscape is beautiful with its bluegray and white contrasts, but it looks cold and needs a touch of color to give it an aspect of warmth and cheerfulness. There is nothing for that particular need that can equal Evergreens in their various shadings and what a shelter they make for birds. Have you ever thought of them, if not, study them up right away and get the fever for they can be planted now before the spring rush is on. In planting small trees be sure to place them where it will be suitable when they are large. A clump may afford a suitable screen for your back yard, not that your back yard is unsightly for, of course, you are one of those back yard enthusiasts who have blooming flowers in place of the rubbish pile. The Evergreens mark the dividing line nicely anyway. Make up your group of different varieties. The dark green lustrous Firs, a Pine or two, and do not fail to have at least one Koster Blue Spruce, they are so beautiful in contrast with the other shades of green. Any one who lived in Western Pennsylvania about thirty years ago will be sure to want a few Hemlocks so rich in elegance. Barberry shrubs allowed to grow in their natural graceful habit and interspersed or bordering the Evergreens are very attractive. The leaves are

beautifully tinted in autumn and brighten the winter scene with their abundance of scarlet berries. At Xmas time do not buy a sawed off tree, but a glorious, "really, truly, live one," as the children say, and when it is shorn of its holiday splendor, it may be joyously planted in your yard where it will continue to be of increasing wonder and interest as the years go by.

Besides the various flowers, plants, shrubs, etc., you expect to have in your garden, plan for a little garden furniture. This is something that has been beyond the reach of home owners of moderate means but of recent years such beautiful things have been made of concrete that even the humblest home may possess a few pieces. A garden seat in a shady corner, possibly near the Evergreen clump may be a restful nook in sunny August. Bird baths not only furnish comfort and safety to the birds but are both interesting and ornamental. And there are vases, and beautiful bowls, and sundials, and window boxes of various designs and at reasonable prices.

Yes, make your plans now, for much of success of anything is dependent on plans well laid in leisure time.

MRS. A. H. AUSTIN.

Change in Gladiolus Growing Firms.

G. D. Black, Independence, Iowa, writes us that on January 1st, 1916, his stock of Gladiolus bulbs was merged with the firm known as Black's Seeds with headquarters at Albert Lea, Minn. The firm is composed of his son, Robert H. Black and Clarence Wedge, of Albert Lea, Minn. The Gladiolus stock will be managed by G. D. Black and handled the same as in the past and stock will be grown at Independence until Mr. Black can dispose of his interests there, when he expects to move to Albert Lea.

The Blacks, father and son, and Clarence Wedge are sufficiently well known to the nursery and seed trade to insure the success of the new firm and that they will make a strong combination there is no doubt.

Wholesale Gladiolus growers report that the demand for first size corms is unusual and it is suggested that this is because many varieties did not make first size corms on account of the cold, wet season. The growth of Gladioli seems to have been very uneven during the past year. Some growers report fine growth and others defective growth.

Classifying Exhibitors at Flower Shows.

A SYMPOSIUM BY WELL KNOWN AND QUALIFIED CORRESPONDENTS
OFFERING SUGGESTIONS ON PROPER CLASSIFICATION
OF EXHIBITORS AT FLOWER SHOWS.

BY MR. CHAMBERLAIN.

In the December number of this magazine Mr. Cooper sets forth in plain terms the real question at issue in this controversy, and the reasons why the small gardeners should be encouraged to exhibit their products at the flower shows.

It was a timely statement, as well as most sane, and it was necessary, for the basic matter in the controversy has been fogged by the silly bickering over the application of the term "amateur."

That term was chosen as a title for the new class simply from lack of a better name, and for no other reason. We know now that it was an unfortunate because misleading choice, for there are, of course, many amateurs who are far removed from the small gardener class.

Having proven our mistake why not abandon that class and its misleading title and try some other arrangement—something that will give to the small gardeners the encouragement that they require and yet not offend the sensitiveness of that class of growers to whom Mr. Cooper has given the appropriate title of "advanced amateurs?"

These advanced amateurs should be in a class by themselves for, as a rule, they either grow a large number of plants from which to select exhibition spikes, or they employ a professional gardener who adds expert knowledge to his opportunity for care in cultivation. The "professionals," so-called, cannot compete with these for, though they may plant bulbs by the acre, they cannot give the time that the growing of these choice spikes require. The small gardener—the man who plants only a small patch—has a much better chance to win prizes than has the man who plants acres full. Also the large grower—the "professional"—has little chance to win from the "advanced amateurs," and a class should be established for these "professionals," into which the amateurs should not be permitted to enter. This would do away with the "open" class and create three distinct classes.

But my readers may ask, where shall we draw the line between the small gardeners and the advanced amateurs? We might fairly limit the small gardener class to those who planted less than five hundred

bulbs. How shall we find out how many bulbs a given exhibitor plants? Accept his statement.

These are intended as suggestions. I am not wedded to them, and will vote for any other plan that is fair and practicable.

MONTAGUE CHAMBERLAIN.

BY MR. HENDRICKSON.

The question of making two classes, Amateur and Professional in the schedule of the Gladiolus Society seems to be creating quite a discussion; all the methods advocated have some good points in them, but in looking over the different ideas there does not seem to be any definite conclusion arrived at; personally, I believe that if the schedule is made up into three classes it could be worked out in a satisfactory way, and I would make the classes as follows:

Commercial Growers,

Non-Commercial Growers and

Open to all.

The "Commercial Growers'" class would naturally include any one growing and selling Gladiolus bulbs through correspondence or catalogue, the "Non-Commercial Growers'" class would include any one growing a few in the garden or the man that grows a few acres of them, providing they are principally for his own pleasure; the "Open to All" class would, of course, allow any one to enter; it seems to me that this arrangement would not allow any ground for any conflicting entries as the "commercial growers" would be competing against each other only; the "non-commercial growers" would be competing against each other only, and the "open to all class" would take care of itself. If the man that grows only a few wants to enter this class and he is beaten by a commercial grower he cannot be offended even if he is a customer of the said commercial grower, as when he enters he virtually agrees to abide by the judges' decision; as a matter of fact many of the wealthy amateurs can exhibit much finer stock than the commercial grower can for the reason that he buys the finest bulbs and gives them the utmost care and spares no pains or expense in getting what he wants, while the commercial grower who may

have a larger stock to select from naturally has only the smallest and poorest bulbs to plant out at the end of the season and is not able to give the crop any special care, especially if he has a large acreage.

Much has been said in regard to the classes as given before, namely: Professional and Amateur, about the fact that it was not fair for the professional, which meant the commercial man, to compete against the amateur who might be his customer, but in observing past exhibitions it seems to me that just the opposite is true, as some of the so-called amateurs have been staging much finer stock than the professionals have.

The above may or may not be a solution to the seeming difficulty, but I really believe that it could be worked out to the satisfaction of all.

I. S. HENDRICKSON.

BY MR. MORTON.

The action of the Ohio Society in eliminating all distinctions as to classes for exhibition purposes seems on the face of it to be a severe setback to the amateur. Still it may be the solution of the question that has been disturbing the American Gladiolus Society and probably the Ohio Society also, or they would not have taken the step. My interest in this question began when a prominent member of the former society was ruled out of the amateur class because he honestly admitted that he had sold a few bulbs, although his general record showed him to be the very best type of an amateur, and there was no other reason except this one for classing him with the professionals. I have never exhibited any flowers in a contest for prizes, but I was so impressed with the injustice of this action that I protested in the annual meeting of the society held in Boston against such rulings. This led to the discussion as to what constituted an amateur, but unfortunately the question is no nearer a settlement to-day than it was then.

I was asked at that meeting what objection I had to all who were in question being taken care of in the open class. I could not answer then as my experience was not wide. But it started a train of thought which has led me to think that possibly this matter will be adjusted with more credit to all concerned and with more fairness to all exhibitors if two classes—possibly three—could be made, taking in large growers in one and small growers in the other. It is well known to those who have attended

shows in recent years that it is just as possible for an amateur who is a large grower to take a prize away from a professional as it is the other way, perhaps more so. This is due to the fact that some of the amateurs put much more care into growing good flowers than most of the professionals. It is also due to the fact that the largest number of professionals are amateurs in reality, very few devoting their whole energy to this crop but growing it as a side issue. Hence exhibitions are divided into two sections, one of large growers who make big displays, showing a large number of each kind, and a second class of those who exhibit a few spikes of each kind.

It is true that this would appear to work against a professional who desired to make a small exhibit but a committee appointed by the society should have power to decide who was a large grower and who a small one. And this leads to the possibility of a third class which would have to be an open class but which would contain only exhibits of a limited number of spikes. The best new seedling might be produced by an amateur and if it was better than that of any professional he would prefer to have it in competition with every thing. Limiting the spikes would allow any amateur to compete with the best professional alive and a person having but a hundred bulbs might take a prize over the largest grower known.

In a nutshell, the professional and big growers among the amateurs are needed to furnish the big things in a show, the small grower must have a chance to compete with others of his class and they both must have a chance to meet on common grounds in matters of new varieties and choice blooms of well known varieties. Just how this can be figured out it is hard to say but it is hoped that some of the more experienced members of the society will be able to work out a scheme.

FRANK S. MORTON.

American Gladiolus Society.

The Massachusetts Horticultural Society has agreed to hold the annual show of The American Gladiolus Society in connection with the annual August exhibition of the M. H. S., Aug. 11th, 12th and 13th, Friday, Saturday and Sunday. The Massachusetts Horticultural Society will donate \$400 in prizes. Secretary Youell states that he hopes to send out preliminary prize list early in February and a liberal donation of prizes is looked for. The Boston show next August will certainly be a big one.

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No. 2

Gladiolus Mixtures.

The growing of Gladioli in mixtures has been sneered at by commercial growers to some extent with the inference that a person who grows Gladioli in mixture is not worthy of serious consideration as an advanced grower. In the December issue, A. E. Kunderd writes on "The Gladiolus in Mixture," as a title, and recommends the practice where intelligently followed out. In the January issue Henry Field mentions mixtures especially and says that he takes more pleasure in them than he does in the named sorts. When two men like Kunderd and Field recommend growing Gladioli in mixture it certainly means something and we beg to give our small weight of testimony to the same effect. Although we grow Gladioli under name and it is, of course, necessary that they should be grown in this way to give the most satisfaction, yet the mixtures are a source of great satisfaction in themselves, and the grower who does not plant a good lot of corms in mixture loses a part of the pleasure of growing Gladioli. Furthermore, the great majority of small growers find it much more convenient, more simple and easier to grow in mixture than to keep the varieties separate and labeled, and who shall say that they do not derive as much pleasure from it? MADISON COOPER.

Dividing Gladiolus Corms.

It would appear that the suggestion of Mr. Crane in our Wayside Ramblings Department this month would be a useful one for a rapid increasing of new and valuable varieties or to increase the vitality of old corms. When a corm is divided in this way and each piece planted separately it gives greater strength to each eye as the roots of each separate piece have a greater area from which to obtain nourishment. This it would seem, is the reason why dividing corms leads to their rapid increase. Observant growers have noted that when large or old corms are planted in a very fertile soil that there is great tendency to throw several stalks whereas in a less fertile soil only one or two would grow.

Some very radical culling of seedlings must be done in the next few years as there are many new seedlings being introduced by many different growers. Those who grow from seed should not introduce or attempt to show varieties which have not positive merit over well known sorts already introduced and no grower who is not already familiar with the best varieties in commerce should consider himself qualified to pass on the merits of new varieties. Those who are inexperienced and attempt to introduce mediocre stock will naturally meet with

the failure which such an effort deserves. We sound this warning for the benefit of the trade at large and especially for the benefit of a large number of rather inexperienced growers who are growing from seed and who are not well qualified to judge of the merits of varieties on account of their lack of familiarity with the best types and varieties already introduced.

MADISON COOPER.

We believe that it is generally agreed that the "wings" of Gladiolus seed should not be removed from the seed in preparing it for planting. It is not only a slow and disagreeable job, but may prove actually harmful to the seed by bruising the tender skin covering the seed itself. The shelling of the seed from the pods is a rather slow task and it takes patience, and certainly the rubbing of the wings from the seed is a much worse job. The seed is a little easier to plant and handle in this condition, but there is no other advantage in it.

Gladiolus—"Lily Lehmann."

[Subject of illustration on front cover page.]

This very distinctive white variety originated in Europe. It has been given a first class certificate and has attracted considerable attention wherever shown. It may be described as an ivory white with the tips of the petals suffused with delicate pink or rose color. It is shaped somewhat like a lily and the very distinctive form of the flower with its fine color, are sufficient to make it worthy of a place in any garden. The spike is of medium length, and it commonly opens several flowers at one time. Its habit of growth is strong for a white variety and when well grown the blooms are large.

We are not well posted on the origin and naming of *Lily Lehmann*, but it is assumed that it is of German origin and that it was named for the celebrated German prima donna and vocal teacher, whose queenly and stately personality it is supposed to resemble.

Have your plans made as to just where you are going to plant your different varieties; also figure out the time as nearly as you can.

Humus.

The old time gardener seldom made up a potting compost without the addition of leaf mold, he had been taught by generations of experience, it was a valuable substance to add to his potting soil. While he may have been ignorant of its chemical effects, he knew the physical effects of keeping the soil open by keeping the particles of sand and clay asunder, thus improving its aeration and porosity.

Experience also taught him, that it is "hungry stuff" and that with the exception of some plants, such as ferns; few plants would do their best in it.

Among the laymen, the common error was and is still prevalent that humus or leaf soil is rich in plant foods, but the practitioner knows better. It does, however, perform important functions in the soil in addition to the physical ones of keeping it open, retaining heat, and holding moisture.

The decaying leaves are a medium for the existence of certain fungi which are very beneficial to the growth of certain plants, notably the Heath, Conifers, Beeches, Chestnuts, etc. The fungal threads or filaments can readily be seen investing the roots of these plants, and are only present when they are in good healthy condition. It has been suggested, that the true cause of the Chestnut Blight is really due to the loss of humus and the attendant beneficial fungi. When one stops to consider how entirely changed are the conditions now from what they were when the chestnut forests were in their prime, the suggestion does not appear so unreasonable, perhaps in time the scientists will prove it to be actually the case that the blight could never have made headway, if the humus could have been conserved.

The forest fire, and the barring of the whole country of growth not immediately useful to man, has undoubtedly upset the balance of nature, results of which are sure to be far reaching and not altogether to our profit.—*The National Nurseryman*.

One of our subscribers in San Gabriel, California, reports that during a heavy frost the second week in January that Gladioli which were coming through the ground were not injured. The temperature went to 29°F. and remained stationary nearly all night. Tender plants were all badly damaged and the orange people all used their smudge pots. The hardiness of Gladioli is only one of its many good qualities.

WAYSIDE RAMBLINGS.

BLOOMING PERIOD.

Variety	Date 1st bloom	Days from May 16
America.....	Aug. 1	76
Augusta.....	" 1	76
Alice Carey.....	" 8	84
Baron Hulot.....	July 30	75
Bernice (Black).....	Aug. 2	78
Brenchleyensis.....	" 1	76
Burrell.....	" 6	82
Black Beauty.....	" 1	76
Blue Jay.....	" 10	86
Blue Bird.....	" 12	88
Canary Bird.....	" 16	92
Chicago White.....	July 18	63
Daisy Rand.....	Aug. 5	81
Dawn (Tracy).....	" 15	91
Europa.....	" 18	94
Evaline.....	" 8	84
Eldorado.....	July 29	73
Faust.....	Aug. 9	85
Golden King.....	July 29	73
Golden Queen.....	Aug. 12	88
Glory of Holland.....	" 10	86
Glory (Kunderd).....	" 3	79
Independence.....	" 12	88
Intensity.....	" 10	86
Klondyke.....	July 30	75
Lily Lehmann.....	" 27	72
La Pactole.....	Aug. 8	84
Lucille.....	" 8	84
Mahogany.....	" 5	81
Mrs. Frank Pendleton.....	" 11	87
Mrs. Francis King.....	" 1	77
Maude.....	" 3	79
May.....	" 10	86
Mrs. Fryer.....	" 19	95
Niagara.....	" 9	85
Patriot.....	" 10	86
Purple.....	" 3	79
Pres. Taft.....	Last of all.	
Princes.....	Aug. 5	81
Prinsepine.....	" 8	84
Pink Beauty.....	July 12	67
Peace.....	Aug. 16	92
Panama.....	" 18	94
Reine De l'Anjou.....	" 20	96
Scarsdale.....	" 11	87
Sen. Voland.....	" 11	87
White King.....	" 8	84
Willy Wigman.....	" 1	77
Black's No. 77.....	" 4	80
" 100.....	" 10	86
" 113.....	" 12	88

I commenced to plant the corms May 16 and finished within a week.

D. C. LEWIS, (New Jersey.)

PLANTING CORMELS IN THE FALL.

I have been told to plant the bulblets in the fall and let them stay in the ground over winter as they will be more likely to grow, and that freezing did not hurt bulblets at all. This was news to me. I am going to plant a lot of bulblets of *Independence* this fall and protect them with a cover of leaves or straw manure to try it. Would be glad to have the experience of any one who has attempted to do anything along this line.

B. F. STALNAKER.

SALT FOR CUTWORMS.

When I purchased the home I now occupy (three years ago) I found the garden plot in a good state of cultivation and fairly free from weeds. However, in the spring when I planted it I found a good many white grubs in the ground and when my plants began to come up I soon learned that there was also a plentiful supply of cutworms. It was a continual fight through the spring to save my plants but in spite of that I had a fairly successful season.

The following spring I got eight quarts of coarse salt and sprinkled it as evenly as possible over the ground about the time the snow was gone, leaving it to be dissolved and carried into the earth by the rains. In the two seasons which have followed I have only lost three plants by cutworms (did not lose any the first year) and I have not seen a single white grub.

At the rate I used the salt it would require about ten bushels per acre, but I think possibly less would be as effective. As there were evidently a few cutworms getting into the ground this year, I shall salt it again the coming spring, but shall use about six quarts and see if it will be sufficient.

I have never seen this remedy suggested although it may be known to others.

GEO. A. WHITNEY.

A ROTARY CLUB SUGGESTION.

I am the "Farmer" member of the Louisville Rotary Club. In April last, we had what we called a "Ladies Night," and a great many of the members donated souvenirs as presents to the ladies. These we put into a basket and each lady was presented with one. My contribution was one *Gladiolus* bulb to each lady and they seemed to be very much appreciated, and a great many of the ladies told me how much they enjoyed it. I am writing you this as it may interest you, and if you see fit to publish it some other Rotarian may do the same thing and help to advertise and popularize the flower.

A. H. H.

AMATEURS VS. PROFESSIONALS.

I do not see why just "amateurs" should be put in competition with the professional gardeners employed by millionaires who can have everything they want to get the best results. Why isn't such a gardener just as much a professional as one who sells flowers over his counter?

D. C. L.

ORIGIN OF VARIETIES.

Answering Mr. Stalnaker's query in the December issue :

Heliotrope, Azure, Jane Dieulafoy, Charlemagne, Deuil de Carnot, La Verrier. Originated by V. Lemoine & Son, Nancy, France.

Armenian, Florence, Astarte, La Comete, Desdemone, originated by Vilmorin, Andrieux & Co., 4 Quai de la Megisserie, Paris, France.

Daytona, Lavandula, Arthur Cowee, Berlin, N. Y.

Empire, a Groff hybrid, which can probably be furnished by Mr. Cowee.

Gretchen Zang, A. H. Austin Co., Wayland, Ohio. F. S. M.

DIVIDING GLADIOLUS CORMS BEFORE PLANTING.

I wonder if many amateurs know that large corms can be cut into as many pieces as there are eyes and each one produce a flower stalk. Care should be taken to leave a section of the root circle with each eye. I have experimented with a few dozen corms this year and found that those which were divided carefully in this way produce equally as good flowers and as good new corms as when the whole corms were planted. When the whole corms are planted it appears many times that only the center portion or eye throws up a stalk. When divided or cut each eye and its portion of the corm will grow and produce a stalk.

LESLIE CRANE.

"THE BEST TEN."

No two persons are likely to choose the same ten, for there is no standard by which to reckon an exact decision, and the choice will be guided solely by individual preference. My preference would give the leadership to the following :

Loveliness, Prince of Wales, Badenia, Europa, Sans Pareil, Golden Measure, Mrs. Frank Pendleton, Rajah, Schwaben, Myrtle.

But there are numerous others that rank close to these leaders :

Gretchen Zang, La Triomphe, Pink Perfection, Lily Lehmann, Orange Glory, White Glory, Faerie, Mary Fennell, Hereda, Summer Beauty, Montana, Primulinus Hybrids.

And that is not near the whole of our extremely beautiful Gladioli, and the coming shows of next summer will no doubt reveal many new queens to be. It is probable that the exhibition at Boston will bring together an array of Gladioli of such real magnificence as the world has never seen before.

MONTAGUE CHAMBERLAIN.

THE TEN BEST.

TO THE EDITOR:—

Pursuant to your request for more opinions in your magazine of the ten best Gladioli, I wish to amend this suggestion and make it a dozen, and a baker's dozen at that. I submit the following varieties after the most careful study and comparison. I would change this list somewhat if price was no object, but I aim to name only varieties that are moderate to very moderate in price. This does not mean that any of them are mediocre. They are all of the highest order of merit as regards color, size of flower, good growing qualities and many of them multiply by division. (Some of these varieties are the very finest in commerce.) The following varieties I consider the best: *Glory of Holland, Peace, America, Mrs. Frank Pendleton, Attraction, Ophir, Niagara, Mrs. Francis King, Velvet King, Princes, Independence, Rose Queen and Fairy.* H. W. GROSCHNER.

Connecticut Fair Awards.

Sorry to say there were several errors in the list of prize winners at the Connecticut Fair held at Charter Oak Park, Hartford, Ct., September 6 to 11, 1915, as given me by the Secretary of the Fair Association and as published in the January issue of THE MODERN GLADIOLUS GROWER. The following is correct :

WEEBER & DON, Chambers St., New York.

For best display of Primulinus Hybrids, \$5. Won by Clark W. Brown, Ashland, Mass.

JACOB THOMANN & SONS, Rochester, N.Y.

For best 6 spikes of any White variety—1st prize, \$5, won by Clark W. Brown, Ashland, Mass. 2nd prize 25 bulbs of *Rochester White*, won by E. M. Smith, East Hartford, Conn.

C. BETSCHER, Canal Dover, Ohio.

For best collection of 5 varieties, 6 spikes each, first prize, 15 bulbs of Primulinus Species, won by Clark W. Brown, Ashland, Mass.; 2nd prize, 10 bulbs of Primulinus Species, won by E. M. Smith, East Hartford, Conn.

J. M. ADAMS.

We have done considerable talking about wood ashes as a suitable fertilizer for Gladioli and the more experience we have with them the better we are pleased. It seems that the chemical elements of wood ashes form a pretty, perfectly balanced chemical fertilizer for Gladioli except, of course, the lack of nitrogen which may be secured from well rotted manure. The charcoal which is usually present in ashes to a considerable extent is helpful as a preventative of disease.

H. H. Groff. ❖

A Sketch of his Horticultural Labors.

HYBRIDIZING THE GLADIOLUS.

Mr. Groff's principal work in horticulture has been with the Gladiolus. He has for the past 25 years been hybrid-

falo. Simcoe is only about 75 miles from Buffalo so Mr. Groff was able to display his flowers there under extra good conditions and they were a revelation to flower lovers. The Gladiolus had been



H. H. GROFF.

izing this flower and with such success that Groff's hybrids are known the world over. They attracted attention in this country when he made exhibits of them at the Pan American Exposition at Buf-

*By Frank S. Morton, in *Portland Sunday Telegram*.

principally known by the old fashioned flower which is not especially attractive but Mr. Groff had at that time succeeded in cross breeding to such an extent that colors and color combinations never before believed possible were exhibited and the interest in the Gladiolus was greatly

stimulated. The number of medals and prizes he has won since then has been many, including Pan-American gold medal, grand prize at World's Fair, St. Louis, gold medal at Jamestown Ter-centennial, gold medal at the Alaska-Yukon Exposition, and at floral and horticultural exhibitions all over this country and Canada.

BANKER BY PROFESSION.

Mr. Groff, who by the way is a banker by profession, is a man in the prime of life, full of energy and initiative, keen of observation and quick of movement. In reply to a question by the *Telegram* representative about how he became interested in such work he said:

"I inherited a love for animals and flowers from my mother. I have always been fond of pets and had everything of the kind around me. The modern knowledge of the similarity of the biology of plants and animals found me with an open and receptive mind, and as appealing more strongly to the imagination than work on animate life, I abandoned the latter, and to the exclusion of almost every other interest, confined my activity to one plant, the Gladiolus, with such an effect that for about 25 years I have missed very few days during the breeding season. I first did some work with the canna but found that our seasons were too short and that frosts came so early that I was not able to mature the plants properly. So I took up the Gladiolus which at that time Europe had been at work on for 100 years but had only broken ground. Their varieties lacked vitality, reproductive powers and adaptability to changed conditions, and my first work covered a complete series of violent outcrosses in which every section was made use of to bring the desirable features possessed by each, under control for transmission in cross breeding. From the foundation work of the first years, by the aid of selected types as sires, according to the practice of animal breeders, has this control been handed down with continuous yearly progression to the present time."

SECURED WILD SPECIES.

In the early days of cross breeding, Mr. Groff secured as many of the wild species as possible (there are probably 150 varieties that grow wild, principally in Africa) and used the pollen in his work, but his advice to the present hybridist is to discard these species as far as possible, the only exception being the possession by one of them of some peculiarity that would improve the present race by transmission to it. Breeding from these wild

varieties he considers of little practical value now, as the further the removal from their many objectionable features, the better, and when by proper selection their best qualities can be controlled and applied according to knowledge and discretion. His rule for plant breeding, illustrated by his work on the Gladiolus of which he has produced probably a million new hybrids, is to multiply types, using special proven selections as sires, on the lines of practice of successful animal breeders. Select and develop domestic races and sections of such high quality, vitality and general adaptability that their progeny will be produced in quantity of the highest possible ratio.

WORKS IN COLOR SECTIONS.

Mr. Groff has carried his work along largely in color sections. The reds and dark colored ones shading on red are in a class by themselves and it is this very class that some of his best work was done, although when he began, reds were not considered very desirable. But he has produced reds of which one spike of six flowers measured one foot by two and with color shade proportionately startling. Work in recent years has been confined largely to light shades to suit the florists' demands, the latest work being on yellows, using the bright colored variety brought from Africa several years ago by the builders of the big bridge over the Zambesi Falls. Blues have also been worked up to considerable perfection, although, as a rule, they do not grow as large as the other colors. Mr. Groff has produced some very fine ones, however, and a strange thing about it is that some of his best blues come from a wild variety that is decidedly terra cotta in general appearance but which has a bluish sheen which has been separated out to give other varieties from a deep blue to the lightest lavender. His varieties are all, as a rule, of exceptionally fine vigor and growth with a full and complete range of colors. He has given names to but very few, proportionately, the following being among those best known:

BEST KNOWN VARIETIES.

Peace is the best all around white yet produced. It is not a pure white as it has a touch of lilac in the throat, and when left to bloom in the sun the petals are slightly stained. But the general effect is white and it has few of the failings of the white varieties in general. It has broad, heavy foliage of rich green, erect and vigorous habit of growth, and gives evidence of vigor and constitution seldom

seen in light colored hybrids. There are many whites, but few which combine so many valuable qualities as *Peace*.

War is a companion to *Peace* and grows sometimes six feet high. The color is blood red shaded to crimson black. It blooms at the same time as its companion, *Peace*, and is one of the most striking flowers grown. The spike is long and straight and the color so startling in its vividness that a bouquet of them is a sight worth seeing.

Along in the same type with *War* are several red varieties that vary in size and shading, *Empire* being a crimson scarlet with a small white line on its inferior petals; *Dominion*, which resembles *Empire* only the color is more intense, and *Majestic*, a huge crimson.

Dawn is a straight and strong plant with flowers of a delicate salmon shading to white when bloomed inside, a small claret stain on the inferior petals.

Evolution has spike of vinelike character and is a delicate rose shaded darker. A vase filled with this variety presents an original and impressive effect and owing to the vinelike character of the spike will produce a decoration fully two feet in diameter, at once graceful and attractive. *Evolutions Perfectus* is an improved form with an increased attractiveness of flower, a large, round salmon, at times blotched white.

Blue Jay is one of Mr. Groff's most valuable varieties and the best in the bluish section to be offered by anyone. Its colors and markings of white and blue have a striking resemblance to the beautiful bird for which it has been named. *Blue Jay* is acknowledged to be the bluest of blues yet to be offered, but as yet a true blue has not been produced. Those known as blues are more of a violet shade.

La Luna is appropriately named as the buds are of a yellowish tinge resembling the color of the moon as it rises above the horizon. As they open, however, the flowers turn to a glistening white, like its namesake as it rises in the sky.

Owing to illness, Mr. Wilmore did not get Chapter IX of "The Gladiolus Manual" to us in time for the January issue, but he is on the road to recovery now and we expect there will be no further delay in the completion of the manuscript for the excellent work he is engaged on.

It should be remembered that the postal regulations do not allow the sending of publications entered as second class matter after the subscription period expires. Send your renewal promptly.

New Catalogues and Price Lists.

M. F. Wright, 1906 Smith St., Fort Wayne, Ind. sends us his 1916 price list of Gladiolus bulbs. Mr. Wright specializes on the Kunderd varieties and lists some of these which are not listed elsewhere. He also has some other special varieties that are interesting.

C. Keur & Sons, Hillegom, Holland have out a special price list on what they call "Main Varieties of Gladioli." These embrace the best American sorts together with many of the foreign specialties. They also list other bulbs, roots and plants.

de Groat & Stewart, Bath, Steuben Co., New York have issued their 1916 retail catalogue. They list a selection of the standard varieties together with several specialties.

Vaughan's Seed Store, New York and Chicago are sending out their spring 1916 book for florists. Two pages of this catalogue are devoted to Gladioli, the balance to the usual fruits, flowers, trees and plants.

Joe Coleman, Lexington, Ohio is sending out his Cultural Guide for 1916. Some of the best new varieties are illustrated and in addition to Gladioli, Dahlias and other flowering plants are listed. Some helpful cultural suggestions are also given.

E. E. Stewart, Brooklyn, Mich. has ready his wholesale list for 1916. A very choice and complete selection of varieties is given. Also the color sections and mixtures are well covered.

Cushman Gladiolus Co., Sylvania, Ohio. Wholesale price list for 1916. A selection of standard varieties together with a few specialties are listed.

Through the courtesy of Bruce Butterton, head gardener for the estate of Edward T. Berwind, Newport, R. I., several members of The American Gladiolus Society who attended the Newport show last August were given an exceptional treat in the way of a walk through the grounds of this famous estate. The Berwind estate has been described many times in various publications and is regarded as a classic in gardening. We will not attempt, nor could we if we would, do justice in the way of a description of what was seen on this little jaunt. Sufficient it is to say that the beauty of the grounds is not of the obtrusive kind, but rather of a dignified and classic style. The premises are very carefully kept and the thoroughness of the work gives ample testimony to the twenty-three years' service of Mr. Butterton.

All desiring to offer premiums for displays in various classes of Gladioli for Connecticut Fair at Charter Oak Park, Hartford, Conn., next September, should send offers as soon as possible to J. M. Adams, care *Hartford Times*, Hartford, Conn.

The Gladiolus on the Film Stage.

Arthur Cowee's Gladiolus farm at Berlin, N. Y., was made the setting for a real Gladiolus play in moving pictures. The name of the heroine appropriately enough is "Gladiola." As usual it is a love story with the rustic suitor, the city suitor, touches of city life, etc. The Edison Company are responsible for this

Hardy Gladioli.

I was surprised to see that Gladiolus *byzantinus* is in some places uncertain. With me it grows like a weed, a single bulb increasing with no more attention than the removal of weeds into a good-sized clump in the course of two or three years. It is, however, the only member of the family that is reliable with me—

that is to say, as regards the power to withstand our uncertain winter climate. I have tried *The Bride*, *Rosy Gem*, and some other half-dozen kinds, but it always ended in the same way—a loss of vitality, which reduced their decorative power to impotence. I live 20 miles south of London, and have a light soil to deal with, and yet I cannot get these Gladioli to flourish permanently. It is excess of moisture in combination with extreme cold that cripples. Much, I should say, depends on altitude. With me the water is at times within a foot of the surface, but where the drainage is very free and a nice sheltered position near evergreens can be had, there should be a fair prospect of success. Covering with Fern or litter can, of course, be done, but we have such a wealth of beautiful things that are well able to bear the climatic changes of this



A Gladiolus Staging with the Real Artistic Touch.

Son of A. B. de Groat of de Groat & Stewart, Bath, N. Y. At the left in the photograph are *Panama* and *Mrs. Frank Pendleton*. Directly behind Master de Groat is *America*. At his left is *Charlemagne* and *Mrs. Francis King*. The white one that he is holding in his hand and those at his feet on both the right and left are *Europa*.

production and those who are interested in helping to popularize the Gladiolus would do well to ask their local "movie" theater to stage "Gladiola." It may be had through the General Film Co., New York, and other large cities. Those who have seen the play speak highly of it and those who are especially interested in Gladioli, or flowers in general for that matter, would doubtless be equally well pleased.

country that it is hardly worth while to trouble much with such as need protection in very cold weather. That beautiful variety *The Bride* is admirable grown under glass and in pots or planted out in frames or in a cool-house yields a rich reward for labor expended, but only in very favoured districts can it be relied on in the open ground.—*Gardening Illustrated*, London, England.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Soaking Cormels before Planting.

TO THE EDITOR:—

What do you think of the practice of soaking bulbets to start germination when planting in the spring and what course do you consider best in reference to the heat of the water and the length of time to soak them?

R. M. C.

Answer:—Soaking seems to be the general practice with some growers, and we believe that it is good practice, too. It, of course, complicates the work of planting somewhat, taking extra time and care. One grower that we know of had the misfortune to boil bulbets of a valuable variety which, of course, killed their power to germinate, but this was purely accidental. Our idea of temperature for water in which to soak the bulbets is that it should not be any more than "hand warm," that is, about as warm as you can bear your hand in and for the length of time, a matter of 10 to 24 hours. Bulbets of different varieties might need different treatment. We have never practiced the soaking of bulbets owing to difficulty of keeping the varieties separate, etc., but from what other growers have told us, there is no doubt but what it will increase the percentage of germination materially. Where the quantity of bulbets or the number of varieties is not too great, we would recommend the practice. Additional suggestions and exact information is solicited.

Identity of *Intensity* and *Vivid*.

TO THE EDITOR:—

In the August issue of your valued journal, I find illustrated and described Gladiolus *Intensity*, which is said to be one of Groff's hybrids, and is described as follows: "The color is a rich, light scarlet, the three lower petals being spotted with white, with a deep scarlet vein through the centre." I am growing a variety under this name, received from a London firm of good standing, which does not answer the above description, but corresponds to *Intensity* of Messrs. Campbell Bros., of Simcoe, Ontario, who have taken over the commercial side of Mr. Groff's work. Their description is: "A new and desirable type of solid color, a rich, velvety purple." Can

you solve the puzzle? Are there two *Intensities*, both raised by Groff?

SCOTT MORRISON.

Answer:—Referring to the query from Mr. Scott Morrison, in connection with which would say that the variety called *Intensity* and described by Messrs. Campbell Bros. of Simcoe, is one which was originally given that name by Mr. H. H. Groff, who, after learning that I had already used the name *Intensity*, authorized me to change the name of his variety to that of *Vivid*, and you will find this variety described on page 11 of my 1915 illustrated catalogue. Undoubtedly the London firm referred to purchased some of the variety *Vivid* in the year it bore the name *Intensity*. Am quite sure that both Mr. Groff and Campbell Bros. now list this variety as *Vivid*.

ARTHUR COWEE.

Forcing Gladioli.

TO THE EDITOR:—

Will you kindly give me some points on forcing Gladioli, such varieties as *America* and *Augusta*? Do they require to be potted and then planted on bench?

H. B. M., N. J.

Answer:—The varieties of Gladioli mentioned, and others belonging to the same class may be planted directly in the benches or beds in rows across the bench or bed about 10" or 12" apart, and the bulbs 4" to 6" apart in the row. When the bulbs have grown to that point that they develop their flower stalks, the plants will need to be supported in some way so that the flower stalks will be kept erect and will be, therefore, straight when cut.

—Florists' Exchange.

Caring for and Planting Cormels.

TO THE EDITOR:—

Will you give me some directions as to the winter care of the little bulbets and also how to plant same?

F. W. B.

Answer:—Quite complete information can be had in the back issues of THE MODERN GLADIOLUS GROWER. Bound Volumes No. 1 and 2 postpaid cost but \$2. All the matter is quickly accessible by means of a carefully compiled index. Quantities of facts and information are contained in these volumes.

Anticipation.

Now we are looking forward to the beautiful Gladiolus season. First, the delicate coloring of *Chicago White*, *Dawn* and *America*. The creamy yellow of *Niagara* blending with the deep purple of *Baron Hulot*, the velvety dark red of *Cracker Jack* with the lovely orchid flowers of *Pendleton* and many others; then later, *War*, the deep blood red, towering in its regal splendor four feet high beside the soft silvery white of *Peace*. There is no flower which gives such rich returns with so little care. From early July till frost it is one Glad. time.

MRS. F. T. BRUNK.

The Fall Flower Shows.

It was my good fortune to attend the Flower Shows held in Chicago and Cleveland in November and as I had such a delightful time I feel like saying something about it.

The Chicago Show opened first and it consisted of fine exhibits of Chrysanthemums, Roses, Carnations and many other flowers and ornamental plants, but the thing that delighted me most of all was a large vase of Gladioli exhibited by Weiland & Rich, Evanston, Ill. They were of the Kunderdi type and I took particular pains to see what attention Gladioli would attract exhibited at this time of the year in competition with such popular flowers as the Rose, Chrysanthemum and Carnation and I was very much pleased to see that they were the object of a great deal of interest, and convinced me more than ever before of the possibilities of the Gladiolus, and I am sure that if it would be possible to make an extensive exhibit of fine flowers in the month of November when people feel like attending Flower Shows it would be one of the greatest boons to our favorite flower possible, and I believe that we could prove Gladioli stand right in the front rank with the above named flowers. After seeing the Show in Chicago two days I went on to the Cleveland Show which was a very extensive one and compared favorably with any Flower Show ever given in this country, and while there were no Gladioli on exhibition it certainly gave me much pleasure to meet so many of my old friends from all over Ohio connected with the growing of Gladioli. It was as interesting as ever to talk with Mr. Matthew Crawford and his son Mr. N. L. Crawford, Mr. and Mrs. Austin, Mr. Alford, Mr. Bidwell, Mr. Coleman, Mr. Betscher, Mr. Gates, Mr. Christy and Mr. Stewart, and then again to have the

opportunity of meeting and talking with Mrs. Francis King who is always so enthusiastic over all kinds of flowers. Meeting these many friends, together with the improved outlook for better business conditions made this one of the most delightful trips I have ever taken. It is a satisfaction to me at least to know that there seems to be such good fellowship among the people in our line of business and while everyone is anxious to do all the business possible there does not seem to be any spirit of petty jealousy, especially among the growers, and each one seems willing to give the other the benefit of his experience.

I. S. HENDRICKSON.

Bound Volumes I and II of THE MODERN GLADIOLUS GROWER are available at a cost of \$1.00 each postpaid. Order from this office.

CLASSIFIED ADVERTISING.

Growers having surplus stock for sale will find this department effective in disposing of it. Five lines (about forty words) \$1.00 per insertion. Additional lines 15c. each.

WE have 5,000 Pink Perfection, 10,000 Lily Lehmann and 8,000 Glory of Holland 1½ inch and up. Write for low wholesale prices. Also 60 other varieties. VANTIL-HARTMAN, Hillegom, Holland, Care P. C. Kuyper, Broadway 10-12, New York.

WISCONSIN grown Gladiolus bulbs, are superior in quality, owing to soil and climate—75 cents per 100 for over stock of 1st size choice mixture, largely named varieties, prepaid postage. Write for quantity price and our catalogue. Lincoln Gardens, Eau Claire, Wis.

W. E. KIRCHHOFF CO., Pembroke, N. Y., growers of the finest Gladioli, such as Pendleton, Panama, Niagara, Pink Perfection, Europa, Mrs. Fryer, War, Peace, etc. Correspondence solicited.

YOUR DOLLAR will buy more here—quality and quantity—75 best mixed Gladioli, \$1.00 prepaid. All kinds of high grade seeds, greenhouse plants, potting dirt, labels, etc. One quart mixed bulbets, \$1.00 prepaid. Gladiolus seed, per 100, 15c. PAUL L. WARD, Hillsdale, Mich., Plant Specialist.

GLADIOLUS BULBS—Will sell my surplus bulbs at 25c. per doz. or \$1.50 per 100, these include all varieties as America, Scarsdale, Pink Beauty and a lot of seedlings. Also 6 varieties of Dahlias 25c. Garden Gloves 20c. per pair. All post free. W. H. LECKIE, 4512 No. Racine Av., Chicago, Ill.

SOMETHING new in Gladioli. Price list for your address on a postal card. F. M. HINE, Waverly, N. Y.

DAKOTA Grown Gladioli. Large, healthy bulbs 75c. per 100, some more, some less. Azure, Hollandia, Golden Queen, Shirley, Independence, Bouquet, Branchleyensis, Baby John, and twenty others. Also, large Garlic bulbs. F. X. WALLNER, Sioux Falls, S. D.

THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.
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GLADIOLUS— *MRS. BEECHER.*

Color, a deep rosy crimson, pure white throat, freely marked and spotted.

Flowers large and well opened and well arranged on a graceful spike.



One of the older and better known of the Childsi varieties.

This variety was used as one of the parents of the well known *Princes*.

The Gladiolus Manual.

By W. W. WILMORE, JR.

CHAPTER X.

Resting and Vitalizing Corms.

It is quite noticeable in stocks of Gladioli that have been grown continually by one person on the same soil that they become weak and throw slender, insignificant flower spikes and propagate almost entirely by division and these often smaller than the mother corm. That is to say, they do not make bulblets enough to mention and the new corms which form on the mother corm are numerous and inferior, often failing to bloom. I am referring to stocks of varieties which have been propagated by division of corms and not stock which is renewed each year from bulblets.

We have many varieties listed which are valuable for their flowers which are very poor producers of cormels. In these cases we naturally depend upon division

making one stock from the corm and in turn, one new corm only.

Fig. C, which is a cross section of a corm, shows the relation of the eyes to the heart (d), (a) being the primary eye (b) secondary eyes, (c) fleshy part of the corm which is rich in starch or plant food used by the new plant in the development of flowers and new corms. When the corm becomes flattened with age as in Fig. B, the heart lacks substance and the primary eye becomes weak like the secondary eyes. When planted, several develop and produce several new corms which is known as propagation by division. There are cases where a single corm starts as many as seven eyes all developing into new corms. Fig. A, shows a peeled corm, its segments and eyes.

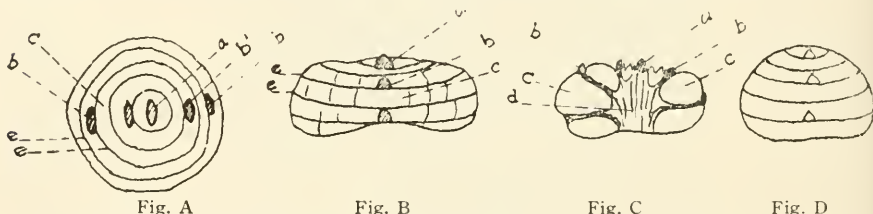


Fig. A.—Peeled Gladiolus corm showing the segments and eyes, (a) primary eye, (b) secondary eyes, (c) zone in which (b') is supported, (e) junction of leaves.
Fig. B.—An old flattened corm (a), (b), (c) and (e) same as Fig. A.
Fig. C.—Cross section of corm showing the heart and its relation to the eyes, (a), (b) and (c) same as in Fig. A. (d) the heart or vitality of the corm.
Fig. D.—A perfect young corm being $\frac{3}{4}$ as thick as it is broad, note the heart depth as compared with Fig. B.

of corms for propagation as well as the few offsets or cormels they produce. This makes it practically impossible for us to grow all the varieties we like without depending on division for propagation.

We, therefore, are obliged to study the corm, find its needs and causes of revision. Upon removing the husk of a Gladiolus corm we find it supplied with eyes like a potato; each eye has its duty to perform. It will also be noted that the husk, which is the base of the leaves of the previous season's growth, divides the corm into sections or zones, each zone being equipped with an eye.

In a perfect corm, Fig. D, the depth of the heart is great, and all the vitality which is in the heart is thrown to one point the primary eye which develops

There are several ways in which the vitality may be sapped from a Gladiolus corm. Perhaps the most common is cutting away foliage when taking the blossom. Disease also will weaken the corm; growing continually on one soil without replenishing it with plant food will starve the corm. Several other reasons may be mentioned, but it is only natural that old corms even though they be well treated will in time play out and unless they be cared for will die.

To build up vitality in the corms it is necessary to treat them in a manner that one would treat his own body in case it was weak and in a run-down condition. Prepare a good soil full of humus and cultivate often after the plants make their appearance above the surface, water freely

but do not allow the soil to become soggy and wet. The Gladiolus is a great plant for taking up water but it does not like to stand in ground that is always wet. When the flower spike makes its appearance (which will be only in a small percentage if corms are very weak) it is advisable to snap them out before the first bud shows color. This treatment will force the strength that would naturally be spent in developing the bloom back into the corm, and upon planting the second season a goodly number should produce good flower spikes.

It is not advisable to grow Gladioli by division except in cases where they are shy producers of cormels. The stock should always be replenished by planting cormels and the old corms can be destroyed when worn out.

It is always a good plan to destroy the flower spike before it opens if the flower is not needed. This method is practiced extensively with growers in the fields even though the stock is from small corms or virgin stock as it is termed.

Diseased stock should be soaked in a solution which will again be mentioned in the chapter on "Diseases of the Gladiolus."

[Continued next month. Chap. XI "Seed and Seedlings.]

Iris and Gladiolus.

It is sure to come, the more extensive use of the Iris and Gladiolus. The range of color in the Iris is greater than in the Gladiolus for more fine species grow wild than is the case in Gladioli. The latter are garden hybrids, and compared with the best of the wild ones are nothing short of magnificent. Irises are not so much man-made for the reason that nature left less to do. They may be had in every Gladiolus color except copper hues, and have the addition of blues and bronzes which we have not yet fixed in Gladioli but which will soon come. Both flowers have been called the "poor man's orchid" and both should be extensively planted. They belong to the same plant family.—*California Cultivator*.

The culture of the Gladiolus has been likened to that of the potato. Certainly treatment which will grow potatoes will grow Gladioli although they are not handled exactly the same. A light, sandy loam is best and the corms may be planted at any time from the time the frost is out of the ground until July 1st. Cutting the flower spike as soon as it blooms relieves the bulb of maturing the seed and will thus result in stronger bulbs for the next

year. About 90 to 120 days are required for maturity. The Gladiolus is propagated in three ways: First, by natural division from the parent corm; second, from seed and third from the small cormels which grow at the base of the new corm.

Gladiolus Primulinus Hybrids.

We read with great pleasure the remarks of your contributor on page 554 of *Gardening Illustrated*, September 11th, headed "Gladiolus Primulinus Hybrids." We look upon these Gladioli as undoubtedly the most beautiful form of the Gladiolus which has been evolved—at any rate, in outline and in delicacy of color. We would like to state the origin of the cross. Gladiolus primulinus was first introduced into England by Sir Francis Fox, from the Zambesi, where it was gathered by Mr. S. H. Townshend, an engineer in the service of the Cape to Cairo Railway, which was at that time being built by Sir Francis Fox's firm.

As soon as they flowered our Mr. James Kelway saw that there was an opportunity of introducing a beautifully clear yellow color and a charming new outline into the Gladiolus family. That was some few years ago, and our work since that date in hybridising and selection has resulted in the very lovely forms which the National Gladiolus Society and the Royal Horticultural Society have recognized by awards of merit and certificates. The race is somewhat earlier to bloom than the other large-flowered kinds, appears to be very hardy and free-flowering, and has a slight Primula perfume. The race is also of very great elegance and grace of habit, and the effect as one approaches a piece with these bulbs in flower is of an array of glowing Chinese lanterns.

Someone has written that it will be a pity to lose the beautiful outline and to enlarge these flowers by crossing, but there is no danger of this, for the most beautiful varieties only need be selected, and the rest can be discarded or left alone.—KELWAY AND SON in *Gardening Illustrated*.

Gladiolus—Mrs. Beecher.

This is one of those real good old varieties which have been somewhat neglected of late for the more modern introductions. It is so good, however, that we recommend that new beginners especially and those who are not familiar with *Mrs. Beecher* should try a few of them this season.

MRS. AUSTIN'S TALKS FOR
AMATEURS.

SPRINGTIME.

The heavy, broad, old colonial door is wide open, and in the bright splash of warm sunlight on the rug, sits Jerry, the cat, apparently fast asleep, for with paws folded under his breast, his head has gradually lowered until his nose touches the floor, but an occasional flick of ear shows that he is not entirely oblivious to the chatter of quarreling sparrows without. There's a murmur of swarming insects in the balmy air, and a honey bee in vain search for nectar, has come through the open doorway and is buzzing hungrily among the blooming plants in the window. The buds on the lilac are a bright green and swelling rapidly. A joyous warble and flash of blue wings adds another proof that spring has come and brought with it, happiness, for in Maeterlinck's wonderful fairy fantasy, "The Blue Bird," this bird is the symbol of happiness. The housemaid with delighted gaze fixed on the first spring bird of the season makes her wish, and leaning indolently on her broom, waits to see if the next flight be upward or downward, and as the bird leaves the lilac for a higher outlook from the elm, resumes her work smilingly, happy in the thought that if spring signs come true that wedding bells will ring for her and "some one" in the coming June-time. Perhaps "some one" is smiling too for "in the spring a young man's fancy lightly turns to thoughts of love."

School children noisily proclaim:—

"Break the first brake, and kill the first snake.
And you can do anything you undertake."

But Grandmother, enjoying a sun bath on the porch says we are too fast, for the daffodils must be snowed under three times, and not until the third time that the greatest basso of the frog pond has had his voice silenced by wintry chill may we hope for the springtime that comes to stay. But to-day is ours and we muse languidly. It seems such a short time since fall when we were so interested in digging the bulbs noting with eager interest the plump growth and increase in bulblets, and later, how interesting it was to walk between the rows of well filled trays in storage, and how anxious we were to have them rooted and counted, so that we might know how many we would have to furnish to those whom we were sure would appreciate them as we did. We were busy and happy, and then suddenly a cloud appeared and a strange fear crept into our hearts, and ere we were aware the Angel of

Death came and one of our dear ones faded away leaving us stricken and heart-sick. Can we go on with the work we were so interested in? It seems impossible, but we know we must. The flowers will whisper of her for they know her every caress, and will keep ever fresh the memory of her sweet counsel and encouragement. Yes, we will go on, but it will never be quite the same.

As the sun shines longer and warmer, the interests of springtime are awakening, and in dreamy anticipation we see, as if on movie film, a grand succession of ever changing scenes. The bulbs which have rested quietly in storage, need but a glint of sunshine and drop of moisture to quicken into growth so eager are they to add their brightness to the world and thus fulfill the purpose for which they were created. And now, the while we dream, the hardy plants are pushing fourth in quick response to the call of spring. There are myriads of snowdrops and crocuses and violets peeping through the grass, and in the old flower bed planted nearly one hundred years ago, are the double daffodils, and the red "Piney" which so delighted the girlhood of an ancestor. As the films of vision change, we see great gardens of gorgeous tulips, and daintily tinted hyacinths filling the air with sweet odor, and numerous flowering shrubs. Then June spreads her beauty over the earth and brings to us her roses, not only the cultivated pets of our tiny garden, but roses everywhere in lawless profusion. On the porches, on the posts, sprawling on the grass. The wild ones hanging their wreaths of loveliness over neglected corners and in out-of-the-way places. Again our gaze is brightened with most exquisite irises in endless variety, columbines, reminding us of tiny birds starting into flight, and all the time there's a constant procession of regal lilies, while the glory of the pæony field is beyond description. Stretching out in long ribbon-like rows come the Gladioli, and for the time all else is forgotten. We see ourselves working among them, watching each new seedling as it comes into bloom, selecting or discarding, as the case may be, ever watchful for new beauty. We gather and carry them like children in our enthusiasm, we take them to the great Gladiolus shows, and in breathless expectancy wait hoping those of our very own may make their beauty known to others as to us. And when the frost kisses the leaf ablush with color we gather our harvest of bulbs weighted with the happiness, gathered day by day, of a well spent summer.

MRS. A. H. AUSTIN.

Gladiolus Corm Diseases.

Suggested Method of Formaldehyde Treatment.

BY WILBUR A. CHRISTY.

ALONG in the early period of the Gladiolus industry, growers were wont to congratulate themselves with the assurance that their own specialty was apparently immune from depredations of insect enemies and from any form of disease. Almost all other varieties of cultivated plants seemed to be subject to particular ailments of their very own, each one having a sort of exclusive monopoly of some evil—insects that turned away from other sources of supply and flocked exclusively to the chosen prey, or some blight or rot that insidiously attacked leaf or root, while plants of other sorts growing in immediate proximity were unaffected. For a common and well-known illustration, the potato will suffice: Its greatest insect enemy, the Colorado beetle, (*Doryphora Decemlineata*) is addicted entirely to this sole source of forage, while the rot (*botrytis*) gains its common appellation of potato rot because it attacks almost only the potato, leaving untouched the various forms of vegetation growing with it. Among them all, the Gladiolus appeared to have no special foe, and for a long time growers entertained no anxiety from this source.

But, as I have intimated, this was in the past. It was a condition too ideal to last. It might have been anticipated that in time, by the mysterious selective operation of nature, some special enemy would be developed, or appropriated, and so it has been. Fortunately, we may believe, this has not included also the form of an insect plague, for the insect enemies are as yet but few. There is an acrid principle in the Gladiolus, similar to that of the poison ivy, (*Rhus Toxicodendron*) which must be distasteful to insects and predatory worms, as they plainly avoid such feeding grounds. Thus far, in my own experience of more than a quarter of a century, I have observed injury from only three forms of insect depredation—that from the omnivorous cutworm, from the innumerable army-worm, and from the pestiferous blister beetle, each of which can be met by a suitable method.

At this time, however, the subject most deeply interesting the grower along this line is that of the corm disease which is spreading so rapidly, and is so disastrous

in its results. It has become so common, indeed, that probably there are very few collections that are entirely free from it, even though the grower may as yet be ignorant of this fact. It may as well be discussed freely, since it is no disgrace, but rather an adverse condition, to which all are alike exposed. I remember that some years since, one of the foremost growers in this country, in speaking of this subject at a meeting of the Gladiolus Society, referred to it almost apologetically as "a very delicate subject." It really seemed, as was the case at the advent of the San Jose scale, as though it were almost a reproach to any grower to acknowledge its presence in his grounds. Like that, however, this has become so almost universal that it is now viewed rather as a common affliction than a personal delinquency. All personal feeling aside, it is evident that some means of combating and overcoming this new enemy must be resorted to, if the growing of the Gladiolus is to continue successful. It is very discouraging indeed to see the plot lose its green and healthy appearance, the foliage turn yellow or wither half-way from the tip in midsummer, and rot entirely off at or beneath the surface of the ground when half-grown, or less, and at the end to harvest inferior, distorted, unmarketable corms as the result of the season's toil. An experience of this kind, which many have had, and which may be the lot of any or all, will lead directly to the conviction that something must be done. But what shall it be?

We can hardly expect to find a remedy by blind experimentation. That is too slow a method. It is better to use investigation and reasoning as well. Reasoning then by analogy, in advance of the conclusions to be reached by the scientific investigation now being carried on, it seems reasonable to conclude that the injury to the plant, as in the quite similar case of the potato rot, is simply the result of the parasitic fungoid growth in or on the plant or corm, of a microscopic fungus, forcing its mycelium root-threads through the ruptured tissues, and sapping the vitality of its victimized host, from which it gains its nourishment by simple robbery, leaving the ill-treated

corm with scarce vitality enough to germinate again, if, indeed, it does not die outright and decay before being harvested. This decay, then, I do not regard as the disease, but simply as the result of the infection which poisons and kills the living substance. In looking for a remedy, then, we would naturally expect, if this theory be the true one, to find it among the various fungicides now in use, or perhaps in some new preparation of this kind. The old remedy, sulphur, dusted upon the corm when planted, has been resorted to, but without any certain benefit. Thus far the use of a formalin solution has been the most effective and also the easiest of application, and I believe the best time to use this is as soon after curing and trimming the corms as may be convenient. The method of doing this which is here described is one of my own devising, which I give for the benefit of other growers. I use a straight can, 12 inches in diameter, and 24 in height, holding about 15 gallons, though only about one-third this quantity of solution is necessary at one time, just enough being used to cover completely the bulbs immersed therein.

The vessel to contain the corms to be treated is made of wire cloth, in the form of a cylinder, with a wooden bottom about

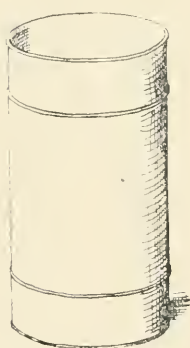


Fig. 1—Can for containing the solution.

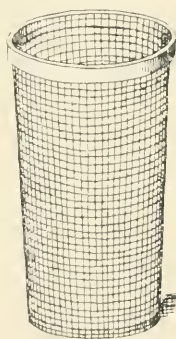


Fig. 2—Wire-cloth vessel for corms.

two inches less in diameter than the can, but larger at the top where it just fills the can, and is attached to a strong wooden hoop just large enough to rest upon the top of the can, leaving the vessel suspended in the can. This holds rather more than a bushel of corms, and the wire cloth is of fine enough mesh to contain cormlets also. The solution I have used is simply formaldehyde in water, the ordinary 40% formalin article kept in every drug store, diluted about

one to thirty-five or forty, which is considerably stronger than in common use for spraying seed grain. The solution is first placed in the can, and then the wire vessel containing the corms is suspended in it, being careful to see that the contents are completely immersed. The length of time it should remain is a matter of judgment. I have allowed the corms to remain twelve hours. The wire vessel

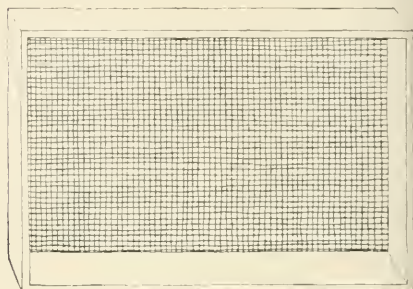


Fig. 3—Wire-cloth-bottom rack for drying.

is then lifted out of the solution, but held over the can to drain until it ceases to drip, when for further drying I prepared a rack 30x36x6 inches with a bottom of wirecloth, in which the drying goes on quite rapidly, especially if placed in the furnace room. This solution is strong enough to stain the corms slightly, but no perceptible ill effect follows. The work is simple and easy, and so far as I have tested it, appears effective. I have thus treated some very badly affected corms, planted afterwards to test the efficacy of the method, and the resulting crop was perfectly healthy and normal, while untreated corms largely decayed in the ground, or produced imperfect corms. Further experiments will be carried on, but the result of two years' test has been very satisfactory. I have previously explained my hypothesis in regard to the action of this fungicide in your columns, so will not refer farther to it now, only to say that the results seem to verify my opinions in regard to it. I might add that I believe it is quite possible for the soil also to become infected, so that rotation will be advisable when disease is suspected.

What is the source of this infection? It does not originate spontaneously, but is propagated as other fungoids are, from preceding parentage. What source is so probable as the imported stock which has been coming to our shores in such immense numbers of late years? Nearly

[Concluded on page 42.]

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Vol. III.

March, 1916

No. 3

Classifying Exhibitors at Flower Shows.

Under this title in the last issue a symposium with three contributors was printed. We are quite aware that some of our readers may be a little tired of this discussion and controversy, but we will not remain satisfied until this matter has been definitely settled to the satisfaction of any fair-minded man. It is not expected that rules can be made which will please every one, but there is no reason why rules cannot be made which will be equitable to all competitors whether they are satisfied or not.

The three contributors are in accord in suggesting that three different classes should be made, but their suggestions for division do not harmonize and besides exact definitions are wanting. Therefore, we take the liberty of offering the only exact solution that we can see to the problem.

Referring again to the February issue, "D. C. L." in our "Wayside Ramblings Department," offers the following pertinent suggestion:

"I do not see why just 'amateurs' should be put in competition with the professional gardeners employed by millionaires who can have everything they want to get the best results. Why isn't such a gardener just as much a professional as one who sells flowers over his counter?"

We are fully convinced that no man

has a right to be classed as an amateur who employs a skilled gardener, and it is just here that we would draw the line. The real amateur is the man who does his own gardening and whether he grows 50 spikes or 50,000, he is still an amateur. If a man employs a professional to grow his flowers he should compete in the professional classes.

Whether the amateurs should be barred from the professional classes or not is a question, but it would hardly seem necessary to do this, and we see no reason why the professional class should not still be the open class. While it is true that the amateur can give greater personal attention to his garden than the professional, yet it must be borne in mind that the professional has all the advantages in securing new and improved varieties and he has the ability and incentive to purchase same in large quantities at comparatively high prices for the reason that he has a regular market for his product. This the amateur cannot do because of the cost, unless he is in the millionaire class.

We believe, therefore, that there really are three classes at the flower shows. First—professionals comprising people who are plainly in the trade whether it is their chief business or not. Second—amateurs who employ expert gardeners in the

care of their flowers. Third—amateurs who do their own gardening.

It is suggested, however, that there is no reason why the second class could not be compelled to compete in the professional or open class, as the fact that they employ professionals, practically makes them professionals. In other words, the product of a professional whether exhibited by himself or another should be entered in the professional class.

We believe that the discussion of the subject has forever settled the suggestion that because a man makes a few sales he should be classed as a professional. An amateur is a person who does his own gardening, and he is entitled to consideration as such when he offers his product for exhibition at the flower shows and if he wants to compete in the open or professional class that should be at his option. He should not be compelled to compete in this class and as long as there is an amateur class made he should be entitled to its privileges.

The Gladiolus Society of Ohio has already settled this matter for the coming show at Cleveland in August. It is hoped that the American Gladiolus Society will publish their exhibition rules promptly so that prospective exhibitors may formulate growing plans accordingly and know in what classes they are to compete.

MADISON COOPER.

American Gladiolus Society.

Secretary Youell, of the American Gladiolus Society, has forwarded to us a list of prizes offered by the Massachusetts Horticultural Society for the Gladiolus Show in Boston August 11, 12 and 13 next.

This list covers the usual color classes with three, six and twenty-five spikes each. There are also a couple of prizes offered for strictly amateur displays and large prizes for collections and artistically arranged exhibits.

T. A. Havemeyer also offers in the amateur class prizes for special displays and in the color classes.

These lists will be published in full with the preliminary schedule which Secretary Youell expects to have ready in time for our April issue.

The Exhibits at a Flower Show.

Editor The Florists' Exchange:

I note in the Sept. 25 number of *The Florists' Exchange* some comment from Ella Grant Wilson under the heading of "Who do the Exhibits Belong to at a Flower Show?"

This matter in Texas and the south, within my experience of about 25 years among flower shows, and such as has been threshed out in all cases, is about like this: In the first place the exhibit is subject to published rules under which it is placed in the hall, and it is often the case that a rule is in evidence covering this very question; at least there should be one to make a definite understanding one way or the other in the matter.

It usually reads to the effect that the exhibit is not to be molested during the show, and to remain intact just as presented by the exhibitor till the expiration of the show, at which time the exhibit reverts back to the exhibitor to dispose of as he pleases.

In case it is the wish of the exhibitor to sell flowers at the show, then usually a lot of flowers are provided independent of any fixed exhibit for selling purposes, a certain per cent. to go to the management of the show for the privilege of selling in the hall.

Yes, certainly an exhibitor has the right to give away a plant or a flower to a friend or customer, but they should be those taken there for the purpose, and in no way connected with his regular fixed exhibit as entered in good faith within the jurisdiction of the show management. By such entering of exhibit he has virtually pledged to conform to the spirit of the show, which certainly will not admit of exhibitors tearing down their displays by inches to give plants or flowers out of it to friends or customers.

When this kind of detracting from a show begins with one exhibitor the others may naturally wish to follow, and it is one of the best ways of demoralizing a show that I have ever heard of.

The fact is, I have seen just such an occurrence once at a show where I acted as an official, and I was amazed and horrified at the tolerance of such proceedings, resulting that on the second day there was practically little left in the show for those who attended.

The first consideration of any exhibitor at a show should be the faithful support of the show as a whole, to which his own interests should be subservient, therefore governable for the time being by the show management.

S. J. MITCHELL.

WAYSIDE RAMBLINGS.

"MIXTURES."

Perhaps the last word has not been said on the subject of "Mixtures" and the article in your December issue opens the way for expression of ideas. Your writer starts out with the frank acknowledgment that that feature of the Gladiolus business "has largely fallen into neglect." Wouldn't it be well to go a little further and let the "good-for-the-soul" confession be made of the cause, or causes, responsible for this faint-heartedness on the part of the buyers? The journey would be short. The gardener who takes intelligent pleasure in the culture of the beautiful Gladioli sooner or later emerges from the darkness of his mixture experiences and in broad daylight says "never again." He may go through one season in darkness, living on hopes that each new opening spike will compensate for the inferior ones and monotonous duplicates, but he gets his floral eyes open after a while. This state of things Gladiolus is not necessarily a reflection on the honest growers, of which there are many, except as to their judgment in the selection of the combinations and the failure to provide against imperfect distribution of the varieties in the mass. There is, however, the great temptation to make the bins of mixtures a dumping place for all sorts of freak varieties, produced either under names or as seedlings, and the very cheap mixtures cannot be expected to escape this kind of material. There must be a way to overcome the skittishness of the public on the mixture question and I suggest the advisability of making up these combinations in such a way as to eliminate both the undesirable things entirely and positively prevent the uneven mixing. This could be accomplished by planning for a desirable assortment, to contain a sufficient range to please many tastes; omit the weakest growers and the poorest doers generally; and also most important, make up unit packages containing each variety in counted out proportions so that not one variety in the lot will be of less number or greater than the prescription calls for; leave nothing to chance. When the wary buyer knows he is getting a scientific mixture guaranteed to be accurately gauged he can be counted upon, as well as the unwary, and the sales will not prove dull thuds, but will bring other sales.

CHAS. F. BARBER.

POISONOUS QUALITY OF GLADIOLUS SEED.

Your advice about not rubbing the "wings" from seed is good. And as I, in an early number of this magazine, advised differently, I wish now to say that my experience has taught me that there is one great reason why the seed should not be rubbed. This reason was first advanced by W. A. Christy who stated that there was a virulent poisonous oil in the seed which badly poisoned anyone who was susceptible to poisons. For two seasons following work on the seed I had what the doctors called erysipelas in my face, causing me much suffering for a week. It was not until after the second attack that I suspected the trouble, and on writing Mr. Christy I found that the symptoms as he knew them, were exactly like mine. Last year I refrained entirely from any work on the seed and had no erysipelas. Persons susceptible to ivy poison must be very careful and not bruise Gladiolus seed and get any of the oil on their hands. The poison will be carried to the more tender parts of the face and will there cause hard and painful swellings and a week or more of suffering.

F. S. MORTON.

EARLY BLOOMERS.

Mr. Lewis' list of blooming periods of Gladioli (which gives evidence of the *Independence* origin of much of his collection) is noticeable for the absence of some early sorts which he appears not to have tried. He omits *Halley*, *Lily Lehmann*, *Early Pink* (Black's) and *Shirley*, all of which I think are earlier than any in his list. Some of the other early sorts are *Jessie*, *Gil Blas* (one of the very early) and *La Prophetesse* which is not only early but very pretty. Another quite early and delicately beautiful is *Berkshire*, one of Groff's, or rather Cowee's—for I think he named it. *Minnesota* is early but more especially precocious, by which I mean that it blooms from very young bulbs as does *Jessie*. The latter, like *Golden King* and *Cracker Jack*, blooms often the first year from the cormel.

GEO. S. WOODRUFF.

SOAKING GLADIOLUS BULBLETS BEFORE PLANTING.

I have not found any other plan as efficient as mixing with about an equal quantity of clean sand from the sand pile, wetting the mass, then placing in a well drained pan or box and placing near the water pipes in a greenhouse, sprinkling

the surface occasionally until the bulblets are ready to sprout.

Care must be taken not to begin operations until planting time, and not to have too many treated at once, in case bad weather prevents the planting. E.

Gladiolus Primulinus.

This fine yellow is a wild species found a quarter of a century ago just below Victoria Falls in Central Africa. Crossed with common garden varieties it produces the loveliest tints in copper and sunset hues, the very shades of color the rose growers are striving for, but none have



Gladioli at Santa Cruz, Calif. Garden of Mrs. Jennie L. Dunning.

yet caught such coppers, salmons and salmon-pinks as may be found in these hybrid Gladioli. Last year I had about 800 of them flower and they were much admired by all who saw them. A writer in the June number of THE MODERN GLADIOLUS GROWER states that "it transmits its color to all its seedlings," but such is not the case as I have half-bloods that are white, shell-pink like *America* and leas scarlet, also just plain red. — *California-Cultivator*.

It is safe to say that the information contained in bound volumes Nos. 1 and 2 of THE MODERN GLADIOLUS GROWER will answer three questions out of four which occur to most any person who grows Gladioli either in a large or small way. Two dollars pays for these volumes post-paid and the index makes the subject matter quickly available.

Cut Gladioli for Decoration Day.

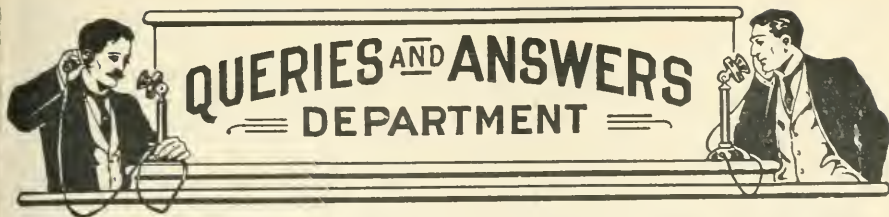
Florists who expect to have bloom of Gladioli for Memorial Day should plant now. A night temperature of 48 to 50° is considered best and such varieties as *Brenchleyensis*, *Augusta*, *America*, *Shakespeare* and *May* have proved good for the purpose. It is recommended that no fresh manure should come in contact with the bulbs and if no well rotted manure is available, fine ground bone or pulverized sheep manure well mixed with the soil will do. It might be suggested that it is difficult to hit just the right climatic conditions to secure bloom at

the right time and besides it is not possible to depend absolutely on the time of blooming of any certain bulbs—they will not all bloom at the same time anyway. There is a good selling demand for Gladiolus bloom in April and May and usually during the month of June unless the season is very early and, therefore, even though bloom does not come exactly at the right time for Memorial Day, it will not be wanting a market. The early varieties for forcing, of the Colvilli Species, known as *The Bride*, *Blushing Bride* and *Peach Blossom*

are commonly used and may be brought into the greenhouse temperature every week or so. Some florists plant Gladioli between their carnations and secure thus a double crop.

Do not put off ordering your selection of Gladioli for the coming planting season. Growers all report an extraordinary demand this year and it is probable that available stocks of some varieties will be sold out this month if, indeed, they have not already. Get busy with your orders if you have not already placed them.

At this time of the year it is advisable to inspect your stock of corms weekly to see that they are not forming roots or sprouts. Keep them well spread out and exposed to the air and avoid a very damp storage place.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]-EDITOR.

Planting for Bloom at a Definite Time.

TO THE EDITOR:—

We want to make a display of Gladioli at our state fair the first week in September. We realize the impossibility of having blossoms just exactly in their prime at the time of the fair and presume that it will be necessary for us to make at least three plantings in order to have a certainty of flowers being just right. We would expect to make these plantings about a week apart and probably to make the first one about June 1st, providing we use first size corms. If we used second size, which we may do, it would complicate the matter and we do not know how much longer it would take. Some varieties we realize would mature quicker than others.

Could you not give us some suggestions along this line? We would also ask whether second size corms could be expected to give us as good bloom as first size. We want to handle this matter just right and have not as yet had sufficient experience to be sure of our ground. B. W. C.

Answer:—We have been an exhibitor at our state fair for three years and naturally have had the same problem that is now confronting you. It is very difficult to be able to plant at just the right time. Not only weather conditions have much to do with it, but different varieties mature in different lengths of time to say nothing of the fact that small bulbs give us later bloom than large ones, and sprouted bulbs bloom earlier than dormant ones. Your only safe way, therefore, is to begin planting for exhibition about May 15th and plant every week thereafter until July 1st. This would give you about six successive plantings and it is barely possible that you might extend the planting season over into July one week. We have planted as late as July 10th to 15th, but it is very difficult to hold back the corms in a dormant condition so late as that. Sixty days is, of course, a short time for development of bloom, but from large corms and with moderately high temperature and uniform rains during July and August you could do it without question, on some of the early varieties, especially. However, your plantings from June 1st to July 1st would be the ones

which would probably bloom at the right time for exhibition the first week in September.

No definite statement can be made without referring specifically to some given variety about what second size corms are likely to do in the way of size of bloom or time from planting to blooming. It is suggested that in planting each week as above outlined that if practicable you use both first and second size as well as some extra large or selected size corms at each planting. Some varieties throw a fine flower spike from second size corms. Other varieties require first size to give good bloom. Some varieties indeed will throw a good flower spike from planting size corms, *Mrs. Frank Pendleton* and *Mrs. Francis King* being examples of this. In any case your second size corms will not give as large a flower spike as the first size corms, but it must be understood that some varieties scarcely make a first size corm. On the other hand, some varieties produce extraordinarily large corms. For instance, *Peace* and *Glory*, and the biggest and best bloom must necessarily come from extra size corms of such varieties.

It is probable that there will be some extra good prizes offered both in the Amateur and Open Classes for the best Gladiolus seedlings and unless we are greatly mistaken there are going to be some fine offerings in these classes at the shows in August. There has never been a time when there were so many fine seedlings coming on as at the present time. As a caution, however, we beg to suggest that those who are growing seedlings be not too anxious to believe that their own productions are superior. It is so easy for one to think their own work an improvement on the work of others that there are few of us indeed who are qualified to judge their own work as compared with the work of others. Therefore, plan to attend the summer Gladiolus shows so as to see what other people are doing and the varieties they exhibit.

Gladiolus Corm Diseases.

[Continued from page 36.]

every grower of any pretensions purchases this foreign stock, usually in order to obtain some new and desirable varieties, and latterly, because of the inducement of low prices for planting stock of the commoner varieties. I know that the first infected stock that ever came to my notice was from such a source, and I have had a number of shipments since which have shown plain traces of disease. My correspondence also leads me to believe that this condition is very prevalent among growers of Europe. It would be well if all importations of foreign Gladioli were thoroughly sterilized before planting, or at least isolated until their true condition was determined. While as yet only a small proportion of the stock in the hands of our growers may be infected, still the greatest care is needed, lest the unavoidable and widespread dissemination of marketable corms carry the disease everywhere, with disastrous results to the Gladiolus growing of this country.

The same appliances and treatment will be effective in ridding stock of the root-aphis, or earth plant-louse, which sometimes infests the Gladiolus. In every instance which has come under my observation, this pest has been introduced by means of purchased stock, and I have no doubt this is the means by which it is transmitted from one locality to another. It easily eludes observation, both because of its small size and inconspicuous color, and because it is usually hidden under the loose outer scales of the infested corms. When the corm is planted, the insects increase prodigiously during the growing season, and when harvested, if allowed to remain, they go on increasing at an astonishing rate, in any moderately warm cellar, until, in some cases that have come under my notice, the bulbs become, as the owners have said to me, "simply a mass of lice." I have never known this aphis to infest the portion of plant above ground, and do not think it attacks either the foliage, stalk, or spike. Its habitat is upon the corm, and among the growing roots from which it obtains its subsistence by sucking the juices, puncturing them for that purpose with its proboscis. This is not so wide-spread nor so serious as is the fungoid rot, but when in any considerable number, as it very soon will be if undisturbed, it must very greatly hinder the growth of good healthy stock. In treating for this aphis, I have not found formaldehyde a satisfactory remedy. Instead, I use a solution

of Nicoticide, which is a most efficient destroyer of insect life, and after testing several different remedies, consider this the best. Let me say in conclusion that there is no excuse for propagating infected or infested stock, and no feeling of false delicacy or of the trouble involved, should prevent growers from making a strenuous and united effort to rid themselves of all these pests, and to grow clean, healthy stock.

The Gladiolus.

The Gladiolus is better adapted for general cultivation than any of the many rare and beautiful flowering bulbs. It is remarkable for ease of culture, grace of habit, beautiful form and intensity of colors, ranging from vivid scarlet to pure white, from rose to yellow and bright purple; in many of the species the colors are wonderfully and beautifully blended.

A writer in the New York *Sun* suggests that Gladioli are effective between roses, phloxes, dahlias and subjects of somewhat similar character, and also in clumps alternating with tritomias and when associated with masses of cannas, while they are suitable for intermixing with plants whose dark foliage shows off the rich bowers to advantage. Those who desire their gardens to be beautiful late in the autumn should not fail to employ the Gladiolus largely, as it is the handsomest of the late blooming gardening plants, and its spikes show to great advantage about the time of the heavy autumn rains.

When spikes of extra fine bloom are required it is necessary to give special treatment, and an open situation is of the utmost importance. A deep, loamy soil, not too heavy, is the most suitable for producing exhibition spikes, but very satisfactory results may be obtained by deep digging and liberal manuring in soils of an uncongenial character.

The planting may be done at intervals of a week or two apart, to secure a succession of bloom, from the middle of April until the first of June.

When the spikes are cut, the flowers will last longer if cut before the lower blossoms have opened. When the spikes are placed in water the flowers will go on expanding until every flower is open, often continuing for weeks in full beauty.—*W. W. Horticulturist and Dairyman.*

Bound volumes Nos. 1 and 2 which may be had from this office for \$1 each, postage prepaid, contain many facts useful to any Gladiolus grower.

M. F. Wright, 1906 Smith St., Fort Wayne, Ind., writes us that out of three varieties submitted to the National Gladiolus Society, London, he was granted an award of merit on two. These were *El Capitan* and *Kunderd's Orange*, the latter known as *Princess of Orange*. Mr. Wright is to be congratulated on his enterprise and is justly entitled to the success he has attained.

We are getting many orders for back issues of THE MODERN GLADIOLUS GROWER to complete files and we still have extra copies for those who want them at 5c. per copy.

New Catalogues and Price Lists.

Paul L. Ward, Hillsdale, Mich. A neat little catalogue of asters with suggestions for culture, has been received.

Black's Seeds, Albert Lea, Minn. send us their 1916 catalogue of garden and field seeds. It includes also flower seeds, asters and sweet peas; also dahlias, peonies and Gladioli. Two pages are given up to the latter. With the catalogue is enclosed a special small catalogue of Gladioli, listing the varieties grown by this company in charge of G. D. Black at Independence, Iowa. This latter is quite a complete catalogue in itself.

Henry Youell, 538 Cedar St., Syracuse, N.Y. sends us his retail catalogue for 1916. As usual it contains some interesting information about the Gladiolus, its care and culture, and there are some very concise descriptions of varieties contained in this catalogue.

A. E. Kunderd, Goshen, Ind., has issued his 1916 catalogue. This contains some very interesting illustrations from the grounds of Mr. Kunderd at Goshen, Ind. as well as the usual fine illustrations of the Kunderd types and varieties. Mr. Kunderd catalogues only his own productions and they make a very complete list in themselves. Some interesting testimonial letters are given.

Breck-Robinson Nursery Company, Lexington, Mass. A catalogue of Gladioli, cannas and dahlias. This company has recently acquired the Gladiolus business of Chamberlain & Co., Wellesley, Mass. and they offer some of the best varieties in commerce as well as some of the newer and rarer sorts.

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Sassenheim, Holland

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THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.

Published Monthly by Madison Cooper, Calcium, New York.

Vol. III.

APRIL, 1916

No. 4



GLADIOLUS—SCRIBE.

(For description see page 50.)

The Gladiolus Manual.

BY W. W. WILMORE, JR.

CHAPTER XI.

Seed and Seedlings.

IN chapter V, "Scientific Structure of the Plant," I have described the formation of seed and its fertilization. Let us now follow it through the germination to the new plant which is the only one of its kind in existence. We, of course, know that true species reproduce the parent but after once being crossed they will never produce the parent, the original species, or themselves.

This interesting fact makes the growing of seedlings the most fascinating part of Gladiolus culture. It takes so long to see our results in flower, and the labor which is involved in bringing about this end, makes us exceedingly proud of our first flowering plant though it be of no consequence. This may explain the reason that so many named varieties of practically no value from a commercial standpoint, have been thrown on the market. The days of better growing are now at hand and more care is taken in the selection of seedlings. It is also harder now to introduce a new variety unless it has marked points of value and merit.

The motive of this chapter is to encourage better breeding and the selecting of seedlings. Things done by halves had best be left undone. Therefore, I am giving the best of my knowledge to make this chapter a guiding star to those involved in Gladiolus breeding who are working partly in the dark.

Our first step in this work is to select the parents and in so doing always bear in mind that we can overestimate as well as underestimate a variety for selection. I mean by this that certain well-bred, well formed plants with large flowers of good color may produce the same class of seedlings as would an ill-bred plant of little or no consequence. Select your parent from the middle class, the one that produces well, grows strong, blooms well and of good habits. It will be found that this central class will make the best parent plants and that their progeny will be of a higher standard than the selection from higher or lower points. This fact has been satisfactorily proven by the best breeders of the day in animal life as well as in plant life and it is also true in the human race. It is the central class of

people that produce the great men and women of the world and never has there been a case where one of these have ever reproduced themselves. The tendency seems to follow that the greater the man the more good-for-nothing becomes the son. The same is true of plant breeding, the greater and better of rare varieties the more insignificant becomes the offspring.

Therefore, select your parents as has been suggested, match your colors for interbreeding as you would have them look if these colors were blended with the artist's brush. Beware of colors which will mottle and blur when mixed, and be cautious that your work is not destroyed by some foreign agent when making your crosses. This work should really be done by growing your two parents together in a place where no other varieties can interrupt by offering their pollen, or by hand pollenization covering the flower as soon as the work is done.

Hand pollenation is accomplished by the following method: As soon as the first flower opens on the plant selected for the parent, the anthers are removed. At this state they have not yet bursted and no pollen has touched the stigma which is also immature. The plant that is to furnish the pollen is also watched so that no foreign pollen is brought in by wind or insects. It is covered in some cases by means of a netting in the form of a long narrow bag with a draw string. It is pulled over the plant and drawn up to exclude all insects. The parent plant is treated the same way. There is a more convenient way, however, than using the bag, and that is by using small squares of cloth large enough to cover the flower. These can be fastened by snapping a rubber band about the loose corners and about the flower. It can also be easily removed and no other flowers are exposed.

As soon as the stigma becomes receptive, which is in most cases the early part of the second day, the pollen can be applied and the flower again covered. I have found a coarse camel-hair brush which is used by artists, the most convenient instrument for conveying pollen. It can be brushed over the bursted anthers and will absorb the pollen like it

would take up paint and when brushed again over the stigma will spread the pollen evenly.

The stigma when receptive will secrete a sticky substance as beads of honey which catch the pollen and starts it working. This also has been explained in chapter V.

When the flower begins to fade the work is over and the cloth may be removed.

After the seeds ripen they are harvested and if a record is being kept, they are plainly marked and stored in a dry place safe from rats and mice. They can be cleaned at any time and should be planted as soon as all danger of frost is past.

A suitable situation is found in which to plant them. This spot, though it be small, should have a sunny location, level as a barn floor and in a position where it can be well taken care of. The soil should be well pulverized but not fertilized. They can be planted in rows 14 inches apart and half an inch deep at an average of four to six seeds per inch or more if space is valuable. A good mulching of coarse straw is advisable to hold the moisture until the tiny sprouts appear, at which it should be removed and a light hoeing given to loosen the soil.

No blooms need be expected the first season although I have known of one or more instances where this has happened. When they begin to ripen they are taken up as are small bulbs and stored away. They are planted the second season and a goodly number will throw a short spike of bloom. The inferior ones should be pulled out as they appear and only the very best allowed to mature. If this practice is not followed the entire stock will be infested with the bulblets of these poorer ones and will never be ejected. The third year will bloom all of them, and the better ones can be staked and separated at digging time.

Were I to mark seedlings for separation and trial I would save nothing that was not decidedly better than its parent or the variety it resembles most; nothing that bore flowers less than four inches in diameter as they appear on the plant; nothing that opens less than six flowers at one time, and nothing that blooms less than 18 blossoms all told. The habit of growth should be strong and healthy, the plant should be erect, the spike straight and the flowers of a clear color, with the color blendings well matched. The productiveness of the plant also has weight, but this, of course, cannot be ascertained at the time of marking.

If the above rules were followed by all

we would have fewer introductions and more good varieties. I look forward to the day when the public will refuse all introductions that are not introduced with the stamp of merit either by The American Gladiolus Society or some other like organization of authority.

[Continued next month. Chap. XII—"Disease in Gladioli."]

Gladiolus Society of Ohio.

Secretary's Office,
Warren, O., March 20, 1916.

The tragic death of Mrs. Matthew Crawford has brought a thrill of sorrow to a large circle of friends, and among these the Gladiolus Society of Ohio, of which she was a highly esteemed charter member, desires to express its appreciation of her beautiful life, and of its loss in her sudden passing away. United with her as we have been, in the love of the good, the true, the beautiful, under circumstances which have revealed to us the worth of her character, we will each feel, as a personal loss, her being so strangely and suddenly called away, beyond the reach of our association and friendship, and we shall never forget what her life has meant to us, and to all who have known her.

The suddenness and shock of her death intensifies the grief we feel at the loss of her companionship, and will but fix more indelibly in memory the loving thoughts that will long be cherished in the hearts that have known her so long and so well, and even of those who have but of late come into the circle of her friends. A beautiful and useful life, extended through many years, growing into the loving appreciation of devoted friends, and the glad looking forward to even better things yet to be—what more has life to offer than this?

And so, while we offer sincere and heartfelt sympathy to bereaved family and friends, whose loss we also in lesser measure share, we know there is a strain of gratitude even in our grieving—we see the glad sunshine gilding our tears and setting before us the bow of hope, until, numbering this friend with other loved and lost we say—Farewell, departed one, but not forever—We shall meet again, Friend of happy days gone by.

COMMITTEE.

The exceptionally cold month of March will result in delayed planting in many places. Therefore, be ready and get the bulblets in the ground as promptly as possible.

Heredity in Gladioli.*

By G. D. BLACK.

AS HEREDITY is a comparatively new word it may be well to define it at the beginning of this paper. Webster says it is the transmission of mental or physical characteristics or qualities from parent to offspring; the tendency of an organism to reproduce the characteristics of the progenitor.

Most of the species of Gladioli are native in the temperate zone of Southern Africa, where they have grown for so long a time that each species will reproduce itself from seeds. Some have grown in the moist soils of the valley for so many generations that they have become adapted to those conditions and will not thrive on the elevated plateaus and mountain slopes. Those which are native in the higher and cooler altitudes will not grow well in the lower lands.

A species or variety becomes acclimated when it is grown in one locality for several successive generations, because it is one of nature's laws, that it takes on characteristics that improve it for an existence there.

These characters are changing more or less during each generation on account of the environments. We cannot aid nature in improving and strengthening the desirable qualities unless we follow nature's laws.

By crossing two varieties that have certain desirable characters in common we may be able to make these characteristics more dominant. Much of the cross-breeding of the Gladiolus has been done in such an unscientific manner that it is surprising that so much improvement has been made. This improvement is mostly the result of extra care and cultivation and the selection of the best each generation. In order to retain the benefit of any extra care and cultivation it has to be passed on as a heritage to the succeeding generation and is there incorporated among its characteristics. Each generation should be an advance toward the desired ideal. There is no doubt in my mind that the ruffling and doubling of the petals of flowers that have been under cultivation for several generations is caused by the extra feeding and care that they have received. Most species of

Gladioli in their wild state are small and lacking in beauty. Abnormal or freak varieties should not be selected as the best for breeding because they are usually the result of a violent cross, and are nearly always weak as propagators and sometimes entirely sterile. *Princeps* has a very large flower but the spike is short and only two or three blooms are open at a time. It was originated by Dr. Van Fleet who crossed *Mrs. Beecher* and *Cruentus*. Burbank crossed *Princeps* and *America*, and quite a number of the seedlings show the markings of *Mrs. Beecher*, one of their grandparents. In this cross *Princeps* transmits the undesirable short spikes in many of its seedlings, but leaves out the abnormal size of flower, and the best characters of *America* are lacking. The parentage of *America* is very much in doubt as three prominent Gladiolus breeders each claim the honor of originating it.

There are many characteristics to be considered when making selections for breeding besides the color and size of flower.

The bulbs of some varieties will stand considerable freezing while other varieties will not. This is also noticed in the foliage. The severe frost that killed our corn crop on Aug. 5th so injured *Panama*, *Hiauwatha* and some others that very few blooms of these varieties opened afterwards. The foliage of some varieties remained green after a temperature of 12° below freezing.

A representative of a Holland bulb-growing firm who called on me a few days ago, says that *Niagara* is a very weak grower in Holland and *Panama* is very vigorous. My experience with these varieties is just the reverse. If he is not mistaken this would seem to show that sometimes difference in climate and location may cause certain characters in the plant to act differently.

A few varieties are sometimes subject to blight and rust. Some are only slightly affected and many others are entirely blight-proof. I have mentioned only a few of the many characteristics that should be considered by the scientific breeder. There is yet a great work to be done in breeding out the undesirable traits and incorporating the improvements which we desire.

* Extract from a paper read at meeting of the Iowa State Horticultural Society, December 9th, 1915.

MRS. AUSTIN'S TALKS FOR AMATEURS.

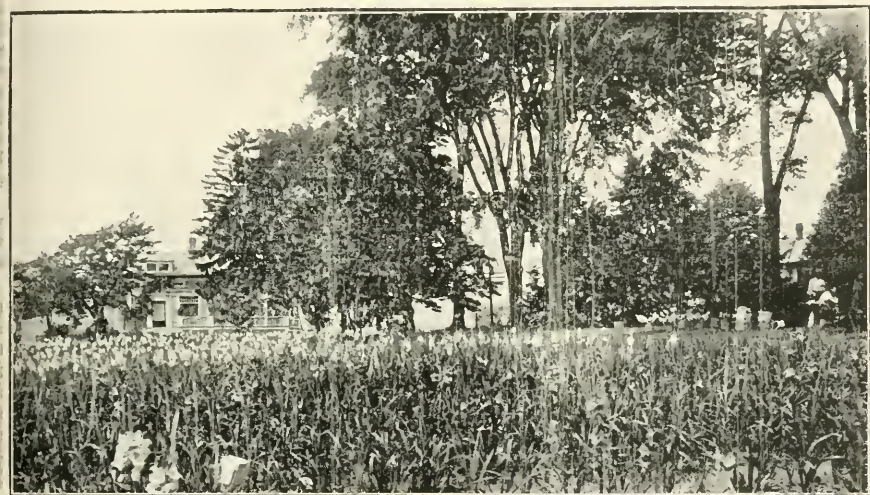
NINE POSTS.

If the weather is still a little too frosty for field work, it is a good time to get window and porch boxes ready. Porch gardening is such a pleasure to me that I hope to interest others in its delights by writing of my own. Perhaps I should speak of mine as "post gardening" for having a terrace porch with nine half posts I confine my efforts to the use of boxes and pots on the posts. I think I should also call it a trial garden, for one of the chief delights is in trying various types of plants according to the conditions

and when new were stained a beautiful Flemish green. Under each corner of the boxes are small squares one inch in thickness, permitting a passage of air underneath the box, and in the center of the bottoms are half inch holes for surplus water. The pots measure 10 in. in depth and 12 in. across the top and do not dry out quickly.

The two posts at the side entrance are in strong sunlight until midafternoon and I use boxes on these. They were filled with scarlet Geraniums in centers with Vincas for edging.

The third post also has bright sunshine and in the pot used there I planted an Ivy Geranium the blooms of which were a rich cerise and matched the wedge shaped center of the leaves of a trailing



Elmhill Farm, home of Mrs. A. H. Austin. The nine posts referred to surround the veranda shown in the photograph.

of sun and shade, and the plants herein described are the ones grown last year.

About the first thing to consider is the necessity of having strong, thrifty plants, and next is a good, rich soil that will feed them well. A well rotted compost is best, but if you haven't it ready, put in an inch or two of rotted cow manure and fill up with good, somewhat sandy, garden soil to which has been added, and thoroughly mixed, a sprinkling of bone meal and a little of the manure. As the tops of the posts are fifteen inches square I use boxes measuring twelve inches square which are made (so the dealer says) from the heart of cypress, have been treated in a way to prevent decay,

Coleus planted for edging the pot. The Geranium did not have a "ghost of a show" for before it was hardly settled the Coleus had grown over and around it and would have completely smothered it had it not been removed. That Coleus was a wonderful thing. It grew and grew (like Mr. Finney's turnip) "until it could grow no longer." It was a nice height for the pot, trailed over the sides gracefully and attracted much attention from our many visitors.

The fourth post is in partial shade, and had for its center a pale pink Ivy Geranium. A very free blooming variety, was a mass of flowers all summer. And for the edging the German or parlor Ivy

was very good. As the vines grew long they were caught up and intertwined and not only covered the pot nicely but hung gracefully below.

The fifth post is nearer the house than the others, more sheltered, is in shade the most of the time and held a large fern dish of the beautiful Maidenhair. It was very dainty and pretty, but needed care in watering.

The sixth post received only the morning sunlight from an opening through the tree branches, and was an ideal place for the pot of bright golden Pansies. How they did bloom, much longer than I had thought and the pretty scalloped leaves and dainty lavender blooms of the Kenilworth Ivy used for edging made a combination that was charming indeed.

And now we come to the seventh post, which receives no sun to speak of, being at the inside east corner of the north porch, shaded by the house on the south, and trees on the east, but Asparagus Sprengeri grew into a great green feathery ball, while some of the longer strands reached nearly to the ground. It is a grand plant to grow in the shady places.

The two remaining posts I reserved for cut flowers, and with Paeonies, Irises, Gladioli, Chrysanthemums, etc., they afforded a beautiful show the entire season through.

MRS. A. H. AUSTIN.

Gladiolus—*Scribe*.

[Subject of illustration on our front cover page.]

This variety has a beautiful, large and well opened flower and is one of the strongest growers and produces one of the largest spikes of any variety in commerce. Its habit of growth makes it a very pronounced variety in any collection. The color is like that fine old variety *Eugene Scribe*, tinted white and more or less freely striped with carmine.

This variety was introduced by John Lewis Childs in 1906. It was named *Scribe* because of its similarity in coloring to *Eugene Scribe*. The variety *Scribe*, however, is of the large flowered Childs type. One of the most interesting features of this variety is the fact that while all of the spikes have the same characteristics, yet there are hardly any two of them exactly alike, as the mottling, while more or less of a feature in all of them, yet it varies to quite an extent. Some of the spots have a very soft white and carmine exquisitely blended with scarcely any marks or mottling, while others will show the markings in a very pronounced manner. This feature is well shown by

the illustration on our front cover page, one of the spikes shown being quite heavily mottled while the other is but slightly marked.

Altogether *Scribe* is a very useful variety as it not only produces a very long spike of bloom but has many open at one time, and is very durable as a cut flower in water. It also forces well for florists' use and for such purposes rivals the old variety *Shakespeare*.

Usefulness of Dirt Bands.

Are dirt bands of real benefit to the florist, or is it better to stick to pots? I received this inquiry recently from a subscriber in Michigan. We used these bands for the first time last year and were anything but favorably impressed with them, but changed our minds long before the season was over. They surely are of benefit to the retail grower in particular, for Chrysanthemums, Carnations or any other small stocks you grow on for planting out or benching. We wouldn't ask for anything more convenient than these bands. They hold more soil than a 2½ in. pot, yet take up far less room. Today every inch, even part of an inch, of space counts with the grower of a limited glass area, with a lot of small stock. Where the top of the plant doesn't take up a great deal of room, oftentimes the roots suffer when crowded in a small pot. You can water such stock as often as you like but the heat will dry the soil out and the plants suffer. With a square dirt band this is different, and when you are ready for benching or planting the little Carnations in the field the plants will lift easily and will not mind the transplanting in the least. While these bands are not intended to take the place of pots there surely is room for them for the man who grows thousands of small plants on during the spring months. They are fine for all such stock as Verbenas, Lobelias, Ageratums, Geraniums, in fact any of the bedding plants you have to grow on in quantities. You can save the handling of pots and what is really of greater importance, you can grow better plants without more labor or attention. For those who ship even, these bands can be used to advantage; the extra cost in weight is made up by receiving a stronger plant. So while we may not all be in favor of these bands there are a whole lot of very good points in their favor, and I predict that they will be used a great deal in the future.—FRITZ BAHR in *Florists' Exchange*.

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
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No. 4

Division of Prizes at Flower Shows.

It has always seemed to us that a division of prizes into first and second at flower shows was a poor encouragement except to the highest class exhibitor, and there is no doubt but what a division of the prizes into three or even four moneys, if money is offered, would be better. Secretary Youell, of the American Gladiolus Society, opened the subject last year by suggesting to those who offered prizes to divide them into at least two or three prizes and many of them have done so. It is noticeable, however, that the large prizes offered by the Massachusetts Horticultural Society at the next show are divided into two moneys only.

Personally we believe that prizes in the Amateur Class should not consist of cash, but of trophies only as this is the real prize for an amateur. Money applies more particularly to professionalism. However, what we desire to suggest chiefly is that those who offer prizes at the flower shows should divide them into at least three, and perhaps four different parts. Of course, the best display is entitled to a larger part than the second, third and fourth, but not the lion's share as is commonly given. The honor of taking first prize is in itself a suitable re-

ward, and, therefore, the second and third and fourth prizes should not dwindle down to almost nothing as they sometimes do. Take, for instance, four prizes with a valuation of \$10.00. The first might well be \$4.00, the second \$3.00, the third \$2.00 and the fourth \$1.00. Or a division of \$15.00 might be \$5.00, \$4.00, \$3.50 and \$2.50. These are only suggestions but it will certainly encourage a larger number of entries by the small amateurs, and even the professionals to divide the prizes into several parts rather than to have them all in one or two parts.

MADISON COOPER.

One Result of War.

The annual of the National Gladiolus Society, England, is just to hand. It contains a list of members, rules and regulations governing the competitions, etc., and as usual list of awards with notes on varieties submitted.

A rather pathetic feature of this annual is a paragraph which reads as follows:

"The Council have decided to hold no shows in 1916. It is felt that so long as the war lasts, and for some little time afterwards growers will not care to incur the expenses incidental upon showing Gladioli. Very little business is being done with the sale of bulbs, and indeed cannot be expected. Flowers are purely a luxury which most of us do not feel justified in spending money upon until

better times come for us all. Our foreign members are unable to bring flowers over at all owing to the numerous formalities and delays now occasioned by the Government regulations, and it is felt that until the Shows can be well supplied with flowers by numerous competitors that it will be well to omit them from the Society's Annual Programme."

Such a condition as this coming home to Gladiolus growers, together with a recent appeal by a high official of the British Government to owners of motor cars that they should not drive same for pleasure, will make it plain to citizens of this country that they are at present enjoying liberties and conditions which our brethern across the water do not enjoy and are not likely to enjoy for some years to come. Perhaps also these conditions may suggest that those who advocate extreme "preparedness," so-called, might with wisdom tone down their ideas. War is a horrible thing, any way it may be looked at, and certainly preparedness for war to the fullest extent spells trouble. A saving habit might well be cultivated by the people of this country in anticipation of a war which we hope may never come.

Mrs. Matthew Crawford Dead.

Mrs. Ellen K. Crawford, wife of the well known Gladiolus breeder, Matthew Crawford, was instantly killed by an Interurban trolley car at Cuyahoga Falls, Ohio, on March 2nd. Mrs. Crawford was identified with many different interests in her home town, Cuyahoga Falls, where she had lived for 45 years. She had been a teacher in the public schools for many years and at the time of her death was a member of the school board. It will be remembered that we noticed the Golden Wedding of Mr. and Mrs. Crawford in our columns in the January issue, 1914. At the time of her death Mrs. Crawford was in her 76th year. She is survived by her husband, Matthew Crawford, who has been honored with the title "Dean of the Gladiolus Fraternity," and by two sons, N. S. Crawford of Oak Park, Ill., and N. L. Crawford of Elyria, Ohio, the latter well known as a Gladiolus grower.

Dr. Margaret Huddleson, 202-11th S.W., Washington, D. C., in sending her subscription to THE MODERN GLADIOLUS GROWER, writes as follows:

"Blest be the man who loves flowers! 'Amid gardening scenes and pursuits,' said a noted English author, 'life flows pure and the heart more calmly beats.' While good old Socrates thought 'The Garden is a source of health, strength, plenty, riches and honest pleasure.' So again—*Thrice blest* be the man who ties his comrades to the soil!"

There may still be those who dislike the idea of labor and especially in connection with the soil, but all labor is honorable and labor in connection with the soil especially is not only honorable but ennobling. Therefore, we should all get into contact with the soil as the right path towards true progress.

Gladioli for Decoration of Grounds of Summer Home.

Would you like to have a beautiful floral decoration about your Summer cottage or bungalow, even though it be too shady to grow Gladioli successfully? Let me tell you how to do it.

With an iron bar, drill holes in the sod about two feet apart, into which place tin cemetery vases about ten inches deep, the shape of a cornucopia, the top of which should be from three to four inches across. These can be cheaply made by your tin-smith or purchased from your florist.

Gladioli may be grown to perfection in your vegetable garden, with which to supply these vases. Every day flush and fill the vases with fresh water, and you will be assured of a splendid decoration for a week or more.

Should you not be able to conveniently secure the tin vases, you can make them of oiled paper, placing them in the holes, and fill with fine sand, which if thoroughly moistened every day, quite as good results will be obtained. I have had much pleasure in arranging Gladioli in this manner, besides adding to the surrounding beauty of my bungalow. ARTHUR COWEE.

We have in hand a very complete article by Prof. L. M. Massey of Cornell, summarizing the results of his four years' work on Gladiolus corm diseases. We hope to print this in the May issue. The subject is an important one and all growers will be interested.

WAYSIDE RAMBLINGS.

CULTURAL SUGGESTIONS—VARIETIES RECOMMENDED, ETC.

Have read with pleasure your very interesting magazine, and am much interested in the cultural directions as outlined by various contributors. Have found no method that surpasses one practiced by me for the last ten years, as follows:

Spade or plow to depth of ten inches late in October or November after applying a liberal dressing of sheep manure; leave the soil as turned or spaded in a rough condition to aerate; during the winter apply wood ashes in generous quantities and when the soil is worked over in the spring, apply some good potato grower or basic slag using at the rate of 600 lbs. per acre; medium ground bone-meal is also good. Make the soil mellow by deep working; plant the bulbs from four to six inches deep, according to size. If the soil is clay or heavy with a tendency to "pack," apply sifted coal or coke ashes before the final preparation for planting. Plant in double rows two feet apart, space four inches in the double row; deep planting keeps the plants from blowing over and making a tangle. Stakes on each side the double row with lath, yarn or heavy twine stretched between, about fifteen inches from the ground to which the heavy shoots may be tied with soft twine, will also hold the heavy flower stalks erect.

Cut when the first flower opens and place in a deep vase of water. The flowers will be more brilliant and the bulb will have a better chance to grow, if only a small amount of the foliage is removed in cutting.

I consider *Silver Star* one of the best whites yet produced, not a pure white but very beautiful. The following make a fine collection of a "baker's dozen":

War, deep red; *Mrs. Watt*, deep red; *Peace*, white; *Glory*, white ruffled; *Myrtle* delicate pink; *Halley*, pink; *Pride of Goshen*, pink; *Intensity*, scarlet; *Baron Hulot*, violet; *Niagara*, delicate yellow; *La Condiare*, red; *Dawn*, (Groffs) salmon pink; *Afterglow*, salmon pink.

There are many other desirable varieties and individual tastes as to color will govern the kinds usually selected. If one is raising bulbs for market the kinds that are prolific of bulblets are, of course, the most profitable.

Reds, whites and pinks are popular as cut flowers and none are better than

America, *Mrs. Francis King*, *Augusta*, *Peace*, *Glory*, *Velvet King*, *Midnight*, and a legion of reds and scarlets.

Would like to hear from some of your contributors on specific directions regarding the care and culture of bulblets.

W. A. DANA.

ORIGINATORS OF VARIETIES.

Referring to recent questions about originators of certain Gladioli, I can give the following information, which is as exact as possible as I have the raisers' catalogues containing the first publications of most of these varieties:

ERNEST H. KRELAGE.

Information asked in January, 1915, by D. E. W., Jr.

<i>Angele</i>	Souchet, 1869
<i>Eldorado</i>	Lemoine, 1897
<i>Eugene Scribe</i>	Souchet, 1868
<i>General de Nansouty</i>	Lemoine, 1895
<i>Lily Lehmann</i>	Alkemade, 1909
<i>Pacha</i>	Lemoine, 1893
<i>Pactole</i>	Lemoine, 1889
<i>Psittacinus</i>	Original species introduced from Cape of Good Hope about 1830.
<i>Senateur Volland</i>	Lemoine, 1893
<i>Willy Wigman</i>	Wigman

Information asked in December, 1915, by B. F. Stalnaker.

<i>Armenien</i> (not <i>Armenian</i>).....	Lemoine, 1896
<i>Azur</i> (not <i>Azure</i>).....	Lemoine, 1902
<i>Badenia</i>	L. Frietsch, 1909
<i>Charlemagne</i>	Lemoine, 1906
<i>Comet</i> (not <i>La comete</i>).....	Krelage, 1910
<i>Deuil de Carnot</i>	Lemoine, 1894
<i>Heliotrope</i>	Lemoine, 1905
<i>Jane</i> (not <i>Jean</i>).....	Dieulafoy, 1894
<i>Le Verrier</i>	Lemoine, 1901

A DOUBLE GLADIOLUS.

TO THE EDITOR:—

We have a double Gladiolus. I want to know if you ever saw one. We are watching it to see if it will come double by crossing.

L. G. P.

Note by the Editor:—We are printing the above, hoping that it will bring out further information. A double Gladiolus, if really double, is certainly new and will be quite interesting as a novelty if not otherwise valuable.

CUTTING GLADIOLUS CORMS.

I have practiced this in a small way for several years on some new sorts, *Princeps* and others, and thought the product was not increased in value. Last spring I cut a few *Blue Jay*, about one-half my stock, cutting them sometimes into three or four pieces each. All the cut pieces bloomed, but the new bulbs were not near as large as those not cut, and the gain was not great.

E.

FORMALDEHYDE TREATMENT OF GLADIOLUS CORMS.

I have found the most convenient way to treat diseased Gladiolus corms with formaldehyde is to put the solution in a strong barrel. Put the corms in sacks for convenience, not more than a bushel in a sack, and place the sacks in the liquid until the barrel is nearly full. After remaining a sufficient length of time suspend each sack above the barrel to drain thoroughly. I have usually applied the treatment just before planting, but no harm comes, I think, if corms are not planted at once, or if they stand a few days and become dry.

E.

very rainy weather, and were left wet in the bags during this time.

The older bulbs should be soaked about twelve hours so that the solution may penetrate thoroughly into all the air cavities beneath the husks. Young tender bulbs need not be soaked so long.

G. D. BLACK.

LILY LEHMANN.

In the article in the February number on *Lily Lehmann* no mention is made of the fact that it is one of the very earliest to bloom; in my experience even earlier than *Chicago White* or *Halley*. With re



"A Well-Considered Garden"—Garden of Irving G. Stoneman, Chagrin Falls, O.

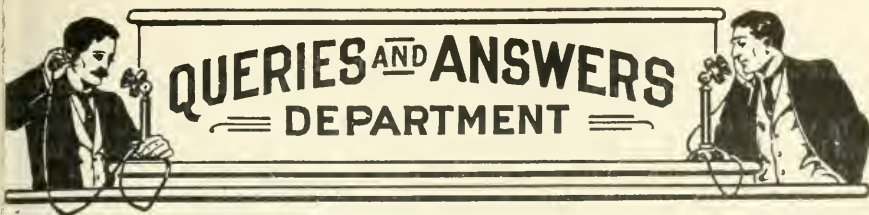
A CAUTION IN THE USE OF FORMALDEHYDE.

The formula recommended by most of the state and government experimental stations for treating potatoes, etc., is to use one pint of the standard 40 per cent formaldehyde or formalin solution to thirty gallons of water. I have been recommending and using a stronger solution of one pint to twenty gallons of water, but on account of an experience during last season in which we lost about half an acre of bulbs, I will hereafter use only the standard government formula. The stronger solution did not injure the two-year-old bulbs in any case, or the yearlings when planted soon after treatment. The bulbs which failed to grow last season were yearlings one-half inch and less in size that were treated just the same way as the rest of our young stock, except that they were not planted soon after treatment on account of a week of

gard to its color, I found that it varied considerably with the weather, and perhaps other conditions. The first bloomings were without any tinge of pink but a very pale green-yellow shade in the throat. Later plantings, coming into bloom in very wet and hot weather, had the faint pink tinge mentioned. I think it a charmingly graceful variety. It is something after the style of *Alice Carey* in its arrangement of flowers. It usually has one or two side branches.

G. S. W.

Announcement is made of the death of Mrs. Frank S. Morton, 169 Neal Street Portland, Me. Mrs. Morton was greatly interested in floriculture. She leaves besides her husband, who is well known to the readers of *THE MODERN GLADIOLUS GROWER*, one daughter, Margaret. Mr. Morton has the sympathy of his many friends in the Gladiolus trade.



This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Planting for Blooms at a Definite Time.

TO THE EDITOR:—

September 6th next, if we both live, it is our intention to celebrate our Golden Wedding Anniversary—fifty years together. Will you please advise me of the varieties of Gladioli I can plant that will bloom about that time or a few days before would be all right?

T. L. W.

Answer:—It is very interesting indeed, to know that you expect to celebrate your Golden Wedding Anniversary on September 6th next and it is also interesting to know that you are planning to have Gladioli in bloom at that time. It is pretty safe to allow about ninety days from time of planting to time of blooming. Thus, for September 6th bloom you would want to plant on June 6th. However, some regard should be had for the earliness of the variety planted and whether it has started growth before putting into the ground or not. The warmest growing season is during June, July and August, and, therefore, the early varieties will bloom in less than ninety days if planted after June 1st. Would recommend that you make successive plantings beginning May 15th and ending about June 10th, planting every five to ten days.

Gladiolus Corms Mildewing.

TO THE EDITOR:—

I have about 2000 choice Gladiolus corms that are mildewing badly and would like to know if there is any way to save them. Have gone over them with a brush and handled them over five or six times this winter. Inside of three weeks they seem to be covered again. Possibly they were not properly cured; also they are stored in a cellar not any too dry. Will cleaning them off every three or four weeks do any good and help preserve them until I can get them out into the air and sunshine?

G. V. B.

Answer:—While it is possible that the curing of the corms might have something to do with their mildewing or molding, yet it is more than probable that this trouble is caused by a too damp atmosphere of the storage place. It should be very easy indeed to remedy this difficulty during the winter when the temperature

outside is cold by ventilating the space a little, as letting in cold air will dry the atmosphere although, of course, so much cold air should not be let in that it will cause the temperature to drop below the freezing point. Stirring the corms by handling them over every week or two will, of course, assist in preventing mold and it will also prevent a sprouting or starting of root growth. A mere molding of the outer husk of a Gladiolus corm will do no damage to the corm itself, but if the atmosphere is so damp as to cause mold it is possible that it may cause a rotting of the corm, and anyway, corms should not be stored in an atmosphere which is so damp as to promote a growth of mold.

Some of our friends store their corms above ground in closets off of living rooms, but this is almost the opposite extreme from your method of storing and it has a tendency to dry out the corms and cause them to develop "hard rot" and other troubles.

Forcing Gladioli.

John J. M. Farrell,

Dear Sir:—Please tell me through your valuable paper if a rose house with a temperature of 60 to 62 degrees would be all right to force Gladioli.

R. L. ISHERWOOD.

In answer to Mr. Isherwood, a temperature of 60 to 62° would be too high to produce good spikes. All the small-bulbed Gladioli such as *Colvillei*, *The Bride*, *Peach Blossom*, *Crimson Queen*, *Mathilde*, *Blushing Bride* and others, also the large flowered sorts such as *America*, *Augusta*, *May*, *Silver Trophy*, *Shakespeare* and others, like a temperature of from 50 to 55° at night with a rise to 65 to 70° during sunshine. Under too high a temperature they become weak both in flower and foliage. Keep the temperature as near 50° at night as possible as this is as high as they seem to care for. They also like more ventilation than is possible in a rose house. A carnation house temperature and surroundings will suit them better than a rose house.—*Horticulture*.

Mediocre Varieties of Flowers, Etc.

In writing on this subject no varieties will be mentioned, for I am aware that it is a delicate subject, but I, for one, would like to see less varieties put on the market, and only those distinct and valuable.

Take any catalog that describes a long list of varieties (mine is no exception) and one of experience cannot select the best by the descriptions for all are described in such a way that they appear to be good, and we might say extra good. If one of experience cannot select the best, then how is the average amateur going to select them?

I formerly had the mistaken idea that the more varieties a catalog contained the better, but now I believe the fewer varieties they contain the better, providing they are the best obtainable.

If I ever issue another catalog I shall have less varieties, and those the best of their color. The past summer I compared my iris when in bloom with this object in view. I now have twenty varieties of German iris in my catalog that are blue of different shades and markings, and my next catalog will contain but four or five of the very best of this number. What is true of the iris is true of most flowers, but probably peonies are the most abused in this respect of all flowers. I have only 150 varieties of peonies, and if three-quarters of them had never been named they would not have been missed. If this is true of 150 varieties, then how is it with the party who advertises 1200 varieties, and then has the audacity to say "all good ones?" I suppose there was never a poor variety of peony named nor was there ever a poor seedling grown, but are they all distinct and valuable additions to our list?

Phlox come the nearest to being "all good ones" of any flower I grow, but there are some much better than others as with other flowers.

I have put fifty named varieties of Gladioli in my mixture, some of these are fairly good, but what is the use of raising all of these varieties when there are such a host of choice varieties to select from? I have had one variety of the Gladiolus for a number of years, and of all the visitors I have had when they were in bloom it was never selected but by one person. I consider a variety like this not worth the bother of raising, and last season they were all discarded—not put into a mixture, but thrown on the rubbish heap. Yet this same variety can be found in

certain catalogs, and is being praised, too.

It seems almost impossible to buy plants, etc., of some firms that are true to name. Mistakes will happen no matter how careful one is, but it seems to me that it is intentional at times. One spring I bought fifty peonies of one variety, but when they bloomed I found ten varieties in the lot, but not one like the variety I bought. There were some extra choice ones, too. I wrote the firm in regard to them, and they told me they were grown by a local grower, but they had some now of their own growing. I took the proffered bait and bought fifty more. These were mixed about as badly as the first, but the choice varieties were not among them.

The past season the worst experience I had was in buying a number of hundred of everbearing strawberry plants. Part of them were standard varieties, but some were new and high priced. These turned out to be all June bearing, and as near as I could tell they were all of one variety. I believe this was downright cussedness for I have written the firm twice, and I believe I made their hair curl slightly, too, but never received an answer to my letters.

About all the remedy there is for this sort of business is to buy from those one knows to be on the square, and who will try to remedy a wrong.

WILLIS E. FRYER.

Catalogues and Price Lists.

Retail list of Gladioli and Peonies from the Carmichael Orchards, Shannock, R. I.

Wholesale trade list of K. Velthuys, Hillegom, Holland for 1916. This list is divided into early flowering and late flowering sorts and a red and yellow color section. Prices by the hundred and thousand only.

Southworth Bros., Beverly, Mass. Retail list of Gladioli, named varieties and mixtures.

John H. Umpleby, Lake View, N.Y. Retail list of the varieties of which he makes a specialty. Also separate wholesale list in quantity.

H. E. Meader, Dover, N. H. Attractive pocket size retail list of standard varieties and new introductions. Also special offer and mixtures.

Gardens of Avon, Avon Station, Des Moines, Iowa. Illustrated retail list of standard varieties and collections. It has an attractive colored cover.

Paul L. Ward, Hillsdale, Mich. March bulletin of "good things" in plants, etc.

E. R. Macomber, Woodfords, Maine. Retail list of Dahlias, Gladioli, Peonies and hardy plants and shrubs.

W. W. Wilmore, Jr., Wheatridge, Denver, Colo. A very complete illustrated catalogue of Gladioli, Dahlias and hardy plants, consisting of sixteen pages and cover. Mr. Wilmore's descriptions are in themselves valuable.

M. S. Perkins & Co., Danvers, Mass. Retail catalogue of Gladioli, Roses, Phlox and hardy plants. Also fruits, etc.

Gladioli for the Sick.

I grow Gladioli for folks who are so unfortunate as to need treatment in the two local hospitals and the sanitarium and who have no friends to provide flowers. I find the foreigners in the hospital wards, who are injured in the mines, especially grateful for attention of this sort. The flat dwellers also, who have no plot of ground, also appreciate them; and sick people and the aged find life a bit more interesting with a dozen beautiful spikes of Gladioli in view in their homes. Have nursed this hobby a number of years and have numerous reasons for believing that it has been worth while.

H. M.

We Grow Gladiolus Bulbs for the Wholesale Trade.

Write for Prices.

Cushman Gladiolus Co.
Sylvania, Ohio

MRS. WATT

Royal Red Rose color, an American Beauty shade of clear rich crimson. A variety everyone loves at first sight. Of tall, strong growth and distinctive appearance. Fine bulbs 15c each, \$1.50 per dozen.

Artistic booklet, something "different" in catalogs free for the asking.

H. E. MEADER,
Gladiolus Hybridist, DOVER, N. H.
Awarded 14 First Prizes season of 1915

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SOMETHING new in Gladioli. A modest price list, for your address on a postal card. F. M. HINE, Waverly, N.Y.

GLADIOLUS BULBS—Will sell my surplus bulbs at 25c. per doz. or \$1.50 per 100, these include all varieties as America, Scarsdale, Pink Beauty and a lot of seedlings. Also 6 varieties of Dahlias 25c. Garden Gloves 20c. per pair. All post free. W. H. LECKIE, 4512 No. Racine Av., Chicago, Ill.

ROSES—Ten large two year field grown bushes, best varieties, only \$2. Fifteen Dahlias, \$1. Gladioli—20 Europa, best White, \$1; 20 Panama, best Pink, \$1; 20 Niagara, best Cream, \$1; 20 Mrs. Pendleton, best fancy color, \$1.50; 100 fine mixture, \$1.50. Be sure and write for our catalog.

M. S. PERKINS & CO., Danvers, Mass.

If you are a professional, commercial, or amateur grower, you will find the columns of

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Send postal for price list.

M. Crawford, Cuyahoga Falls, O.

"THE AMERICAN BOTANIST"

Is published for all who are interested in the curious facts about our native wildflowers.

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Fine mixed Pansy plants—none better—Dozen, 35c.; 100, \$2.00, prepaid. Gladiolus seed, fine mixed, 100 for 15c. Gladiolus bulblets, extra good mixture, 200 for 20c. Americas, firsts, 75 for \$1.00. All prepaid.

PAUL L. WARD, Plant Specialist

Hillsdale, Mich.



MRS. O. W. HALLADAY
(Kunderd)

Creamy white suffused soft pink. Words fail to describe its beauty. "Peaches and cream" come the nearest to giving you an idea of its exquisite coloring. Tall strong spike with 8 to 10 large flowers open at a time.

Price \$1.00 each or \$9.00 per doz.

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(Kunderd)

Carmine red with amaranth red throat. Medium tall, erect spike. One of the very earliest and valuable on this account as well as for its individual beauty. First prize, amateur, for best red, Newport, R. I., August, 1915.

Price 50c. each or \$5.00 per dozen

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blooms certain to saty

	Postfree	Each	I
America	- - -	\$.05	\$
Augusta	- - -	.05	0
Baron Hulot	- - -	.05	5
Blue Jay	- - -	.20	0
Cracker Jack	- - -	.05	5
Early Pink	- - -	.05	0
Empress of India	- - -	.10	5
Evaline	- - -	.05	0
Geo. Paul	- - -	.10	0
Glory of Holland	- - -	.10	5
Halley	- - -	.05	0
Hohenstauffen	- - -	.10	5
Independence	- - -	.05	0
Klondyke	- - -	.05	0

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T E

CLARK

Ashland -



ON J

"Yours truly" on the right and
is seen the variety "Hohens f

longing

bulbs that will produce
critical flower lover.

	Postfree	Each	Doz.
Cory	-	\$.10	\$.75
Esfeuer	-	.20	1.75
me Butterfly	-	.25	2.00
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s ^r . King	-	.05	.40
Augusta	-	.05	.40
e Taft	-	.10	.75
pine	-	.10	.75
maryllis	-	.20	2.00
elster White	-	.25	2.00
e Torch	-	.25	2.00
ic	-	.05	.40
ing	-	.10	.75
r	-	.10	1.00

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BROWN, Massachusetts



Down on the left. On the right
the left is "Meadowvale."



MONGOLIAN
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Superb yellow with a slight tinge of pink in the throat. Flowers large and graceful with eight to twelve open at a time. Long, straight spike. Blossoms quite early. Awarded a Certificate of Merit at Boston, Mass., August, 1913. First prize at Cleveland, Ohio, for best yellow, August, 1913. First prize at Hartford, Conn., for best yellow, September, 1914. First prize at Newport, R. I., Aug., 1915. First prize at Worcester, Mass., Sept. 1915.

Price \$1.00 each or \$10.00 per doz.

SPECIAL TRIAL OFFER

Mongolian, price	-	-	-	\$1.00
Mrs. O. W. Halladay, price	-	-	-	1.00
A. W. Clifford, price	-	-	-	.50

One of each for \$2.00

Always mention The Modern Gladiolus Grower

PEONY

FLOWERED DAHLIAS

	Each	Per Doz.
Apollo, <i>Vivid Scarlet</i> -	\$.25	\$2.50
Beatrice, <i>White</i> -	.50	5.00
Bertha Von Suttner, <i>Pink</i> -	.25	2.50
Carnival Queen, <i>Cherry</i> -	.25	2.50
Colorado, <i>Sulphur</i> - -	.25	2.50
Empress, <i>Large Scarlet</i> -	.25	2.50
Glory of Barrn, <i>Lav. Pink</i> -	.25	2 50
Geisha, <i>Red and Orange</i> -	.25	2.50
His Majesty, <i>Red and Amber</i>	.25	2.50
Modesty, <i>Salmon</i> - -	.50	5.00
Ophir d'Or, <i>Gold</i> - -	.75	7.50
Q. Wilhelmina, <i>White</i> -	.25	2.50
Sunshine, <i>Yellow</i> - -	.25	2.50
War, <i>Blood Red</i> - -	.50	5.00
Zeppelin, <i>Lav. Pink</i> -	.25	2.50

See retail list for fuller description. Sent on request. All prepaid to your address.

W. W. Wilmore, Jr.
WHEATRIDGE, COLO.

THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.

Published Monthly by Madison Cooper, Calcium, New York.

Vol. III.

MAY, 1916

No. 5

GLADIOLUS—

CARDINAL.

Color, a bright, clean and most intense cardinal-scarlet, very rich and showy.

Throws an almost perfect spike of large flowers, well set and all facing one way.



Introduced by John Lewis Childs in 1904.

Considered a decided acquisition when introduced and has not since been wholly superseded by any other variety.

The Gladiolus Manual.

BY W. W. WILMORE, JR.

CHAPTER XII.

Disease in Gladioli.

THE Gladiolus like many other plants is often infected with disease. This may rise from any one of several sources. It is hard to tell in some cases why the corm should become diseased. Perfectly healthy corms sometimes become badly diseased during winter storage, also do healthy corms become affected while growing in the field. To determine the reason for each individual failure one must study his own particular case.

There are two forms of disease which are very common, they are, namely, Dry Rot and Scab.

Dry rot causes the corm to dry up and turn black. It is caused by a fungus that eats the vitality out and leaves the pulp to harden. This may be caused from storing the corms in a damp place, storing before thoroughly cured, or by infection. When once a corm becomes attacked by Dry Rot it is practically worthless and had best be destroyed. The balance had best be treated by soaking in Blue Vitrol solution or Formaldehyde according to the instructions given further on.

Scab is very common with all growers of Gladioli, but it is not especially dangerous unless it becomes chronic. It comes from several causes, particularly manures. It also is a fungus disease that eats the tissue of the skin on the surface of the corm. It works continually while the plant is in growth or while dormant. Perfectly healthy corms when planted may be scabby when dug, or badly scabbed corms when planted may be dug perfectly healthy. These also should be treated before being planted.

Soft rot comes from bruises, dampness, frost bites, heating and sweating in storage or from poor curing. This can hardly be called a disease; it is more neglect than anything else.

Other diseases may be found but are not common. All originate from some cause that germinates fungi. I will endeavor to enumerate the various causes that produce the fungus that attack the Gladiolus causing the so-called diseases: (1) Planting in ground that contains a good portion of manure not thoroughly rotted. (2) Alkali soils that are more or less damp. (3) Sour or wet soils. (4) Planting in soils that have become af-

ected from former crops. (5) Storing before thoroughly cured and in damp cellars. (6) Storing in tight boxes containing large bulk. (7) Heating and sweating while in storage. (8) Cold and damp quarters. (9) Lack of ventilation. (10) Neglect in all stages of growth referring to cultivation and watering.

We notice that some varieties are more susceptible to disease than others and consequently we argue that if one becomes diseased under certain circumstances that the rest should show the same signs and that we are at a loss to know just what to attribute the cause. We must take into consideration that some varieties have a stronger constitution than other varieties. That which will affect a weak variety may not injure one that is stronger. This may be better explained by referring to the white varieties, most of which are susceptible to disease, while darker colored varieties are strong and rugged. The skin tissue of the white varieties is more tender than those of dark varieties and consequently they become diseased first.

It was thought for a long time that disease in Gladioli was contagious and that it could spread to healthy corms. This I think is a mistake except that healthy corms may become affected by being planted in soil that is full of fungi from previous crops. From personal observation I have never known that the disease spreads while in storage except from the causes above stated.

Scabby corms when treated with the formula prescribed will in most cases revive and be free from the disease when dug. It is then necessary that they have the proper treatment and care that they do not become affected again. I once bought a variety of Gladioli from an Eastern Grower which upon arrival was the most disgusting lot of corms I have ever seen. The scab had eaten holes in them that were large enough to lodge a sweet pea seed. In fact, the husk had fallen off of most of them. I soaked them in Blue Vitrol solution and planted them. They grew and did splendidly, and when dug in the fall they were perfect. One could not have recognized them as having ever been diseased. Since that time I

have never seen a diseased corm in the lot and it is now six years.

The following solutions have been tried and found successful. There are others no doubt that are as good but the writer has tried the two mentioned and found them to be good.

Formaldehyde Solution—Mix in proportion to the quantity of corms to be treated 1 pint of formaldehyde to 18 to 20 gallons of water. Soak from 10 to 14 hours according to how badly the corms are affected.

Blue Vitrol Solution—Dissolve 1 pound of Blue Vitrol in 10 gallons of water, soak from 10 to 12 hours.

In both cases plant as soon as possible upon removing from the solution.

Small corms should not be soaked as long as large corms.

[Continued next month. Chap. XIII—"Growing Commercially."]

American Dahlia Society.

Address by President R. Vincent, Jr., at National Flower Show, Philadelphia.

[Reported in Horticulture, Boston.]

After some preliminary remarks in reference to the organization of the Dahlia Society and its work thus far, Mr. Vincent proceeded to give some cultural advice on Dahlia growing, with stereopticon slides, as follows:

"The most suitable soil for growing Dahlias is a sandy loam. Heavy soils can be lightened by the use of coal ashes or sand, anything that will help to make the soil porous. Whenever possible the land for Dahlias ought to be plowed or spaded up the fall previous, the action of freezing helping to make the soil more pliable.

FERTILIZER OR MANURE.

We ourselves use very little manure, preferring bone meal with the addition of a little potash. If the ground is spaded in the fall or early winter the bone could well be mixed with the soil at that time. In using manure we would rather use it as a mulch. Put it on any time after the plants or roots are set. Any kind of material used for mulch around the plants will retain moisture and save watering and if watered will keep the soil from baking. By using bone we get a more stocky growth and more flowers—at least this is our experience.

PLANTING.

We find that the June-planted Dahlias invariably give us the finest or exhibition blooms. The early plantings have the extreme hot weather to contend with,

very often causing an indifferent growth: the stalks get hard and the plant forms a mass of small weak limbs with poor flowers if any, and more subject to disease and insect pests. This condition can only be remedied by a vigorous use of the knife, cutting back hard so as to cause the plant to make a new and strong growth.

The above troubles are often ours, but there are some years when there are exceptions. You may ask then why do we have these troubles. My advice is 'do as I say not as I do,' as it generally takes us six weeks to plant our crop, even by using machinery in planting.

INSECT PESTS.

The Dahlia is not exempt from insect pests any more than other flowers; and the growers will find that a few sprayings, especially during a drought, are an advantage. Tobacco solution, soap, etc.,—almost any insecticide will answer; except that for the black aster bug, which feeds on the flowers alone, hand picking, if not too numerous, is the best remedy. They can easily be seen as they very seldom touch the dark colored flowers but always white or pink.

STAKING.

To have the Dahlia grow and show up to the best advantage they ought to be tied up to a strong stake, and to get large flowers thin out when too many limbs start out from the stool or main stalk, also disbud (as per figures shown upon the screen.)"

Mr. Vincent then gave a list of varieties which his experience led him to recommend as the best in their classes, as follows:

Six Best Peony-Flowered—*Bertha von Suttner*, *Geisha*, *Germania*, *Glorie de Baarn*, *Queen Wilhelmina*, *Queen Emma*.

Six Best Show—*A. D. Livoni*, *Chas. Lanier*, *Ethel Maule*, *Souve*, *Mme. Moreau*, *Yellow Duke*, *Zebra*.

Nine Best Cactus—*Countess of Lonsdale*, *Golden Gate*, *J. H. Jackson*, *Kalif*, *Marguerite Bouchon*, *Rene Cayeux*, *Sweetbriar*, *Wodan*, *Wolfgang von Goethe*.

Six Best Pompon—*Alewine*, *Allie Mourey*, *Indian Chief*, *Little Beauty*, *Little May*, *Snowclad*.

Six Best Decorative—*Delice*, *Hortulanus Fiet*, *Jack Rose*, *Jean Charmant*, *Le Grand Manitou*, *Papa Charmant*.

Six Single Century—*Ami Barillet*, *Fringed 20th Century*, *Rose Pink Century*, *Sensation*, *Setting Sun*, *White Century*.

Old subscribers wishing to take advantage of present subscription price may pay in advance at the present rate of \$1.00 for three years for any length of time they may desire. After July 1st the rate will be \$1.50 for three years.

MRS. AUSTIN'S TALKS.

AN OVERLAND RIDE AND GINSENG.

We were on our way home, driving along the shore roads as much as possible, the horse walking or jogging slowly, apparently enjoying with us the sunshine and shade, turning readily into the sidelanes leading to the water's edge, as if the nephew had not slyly pulled the rein to guide her there, for Lake Erie never ceases to fascinate one, and indeed I was beginning to think it too much so, for so little does youth realize the flight of time. We rode on listening to the soft crunch of the wheels mingled with the wash-wash of the waves which gradually became barely a murmur so placid were the waters, when with a frightened snort and jump that nearly threw us from the carriage our horse made known to us that something quite unusual was occurring, and looking up we saw, reflected mirror-like, the ships bottom upward in the sky. Clear cut and beautiful they were and we realized that we were beholding a mirage, one of the most wonderful of nature's caprices, and almost unknown in that section. The horse lost her interest in shore travel and with plain horse sense expressed anxiety to return to the safety and comfort of the home stable.

We spent the night in the home of a farmer and made an early start the next morning, traveling through a more hilly section. Up and down, winding around wooded slopes and romantic byways, brought us to a pretty country town. As I waited while the nephew sought eats, and sweets, for our picnic lunch, a voice at my elbow asked, "Seen the gardens yet?" Gardens! Sunken gardens, hanging gardens, colonial gardens, gardens of all sorts flashed through my mind and perhaps seeing my astonishment, anyway not waiting for a reply this Oracle of the village went on, "They're getting rich, and my son-in-law has one, too, and he's making more off'n his half acre than I get out of my hundred and fifty. I can show you one right over there other side o' that white house," and he started on while I clambered from the carriage and followed along. "Here we are," as we approached a shedlike structure with door open, but a padlock hanging on the staple. The owner conspicuously moved a gun from one side of the doorway to the other mentioning, apologetically, that they had to be prepared for thieves, thus intimating the value of his crop.

A glance around and I exclaimed, "Why, it's Sang." I recognized it quickly for Ginseng and I were old friends. In younger days as I roamed the woods gathering wild flowers or nuts, I also gathered "Sang." On the northern slope, in the denser wood, perhaps there would not be flowers, but I might find "Sang." I liked the root to chew, and the balls of scarlet berries to decorate my room. They were a pleasing contrast with the eggs stolen from the blackbird. A crime innocently practiced to save (?) the farmers' corn.

Although Ginseng had its place in the colonial attics along with Thoroughwort, Goldthread, Pennyroyal, Wormwood, Bethroot, Goldenseal and other medicinal herbs, the dames did not take to it so kindly, and the "Sang" hunters exported their stock to China, where it was not only used as medicine but it was said, that certain roots in resemblance of human form were considered sacred, and fabulous prices were received for them.

Another story is that the gathering and exporting of Ginseng in our own and adjoining counties laid the foundation of the wealth of Jay Gould. Whether such rumors were true or not, it is certain that wild Ginseng brought good prices, and was quoted in the markets along with wheat and other staple products.

It can be propagated from seed only, and there being no commercial demand for seed, much of it was lost, and the fact that it requires eighteen months to germinate was another reason for the decreased supply. The price soared to \$8, \$10, \$12, \$13 and over per pound for dried root, and good four-year-old seed bearing plants sold readily at \$25 per 100 plants for cultivation.

This was something new and interested me. The cultivated plants looked very thrifty, but the owner explained that a sandy foundation was preferable, that his soil was hard clay and in unusually bad condition having been a "Widder's garden for nigh thirty year," and that he had brought many wagon loads of woods soil and leaf mould to mix with it, for Ginseng required natural conditions.

The rest of the way home I pondered on the cultivation of Ginseng.

[Continued next month.]

MRS. A. H. AUSTIN.

Mrs. Austin is promising to give us some interesting information about that "get-rich-quick" plant, ginseng. Most everyone has seen this exploited and boomed, chiefly by those interested in selling stock for propagating. Some facts will be useful at this time.

Cutworm Control.

NUMEROUS complaints of the ravages of cutworms, especially in relation to corn, are received each season by the department. Prompt action is necessary for controlling cutworms after their presence becomes noticeable in the spring, which is usually about the time the corn begins to sprout. Because of the fact that the delay necessary between the time the worms make their appearance and the time a reply can be received from the department is often disastrous to the crop, the importance of recognizing these insects and knowing how to control them is evident.

Cutworm injury almost invariably occurs in the spring, the plants usually being cut off at the surface, or a little below the surface, of the ground, beginning as soon as the first plants sprout and continuing until late June or early July, by which time the worms are full grown. Feeding takes place at night, the worms resting during the day beneath the debris or in the soil at a depth of from one-half to one inch below the surface, and since they closely resemble the color of the soil in most cases, the cause of the injury is often not apparent. However, if the soil surrounding the cut-off plant be examined carefully, the culprit will quite likely be found curled up in the soil.

LIFE HISTORY.

The various cutworms are known under a number of popular names, such as the glassy cutworm, greasy cutworm, variegated cutworm, clay-backed cutworm, etc., but the injuries caused by them are very similar and their habits in general are also much the same. The parents of cutworms are grayish or brownish moths or "millers," which commonly occur at lights during summer evenings. Each moth may lay from 200 to 500 eggs, either in masses or singly, in fields covered with dense vegetation, and hence are to be found more often in cultivated fields which have been in grass or weeds the preceding fall. The eggs hatch in the fall, a few weeks after they are laid, usually during September, and the young cutworms, after feeding on grass and other vegetation until cold weather, pass the winter as partly grown caterpillars. If such infested fields are left to grass, no noticeable injury is likely to occur, but when it is broken up and planted to corn or other wide-row crops, the worms, be-

ing suddenly placed on "short rations," wreak havoc with newly planted crops, the nearly full-grown worms feeding greedily and consuming an enormous amount of food. In northern latitudes they attain full growth and stop feeding in late June or early July and change to the pupal or resting stage. The injury often ceases so suddenly that farmers are at a loss to account for the fact.

CONTROL.

Land to be planted to corn the following spring, especially such land as has laid in grass for a considerable time and is likely to contain cutworms, should be plowed in midsummer or early fall about the time the eggs are laid, or better, before the eggs are laid, for then vegetation which is suitable for the moths to lay their eggs upon is removed. The earlier the preceding year grasslands to be planted to corn are plowed, the less will be the probability that the cutworm moths will have laid their eggs thereon, and the less, consequently, will be the danger of injury by cutworms the following year.

Late fall and winter plowing of grasslands, although not as effective as early plowing, will destroy many of the hibernating cutworms, as well as such other important corn pests as white grubs, and should be practiced when earlier plowing is impracticable.

Pasturing hogs upon land supposed to harbor cutworms is a beneficial practice, as these animals root up and devour insects of many kinds, including cutworms, in large numbers. Farm poultry, if trained to follow the plow, will prove of inestimable value.

When cutworms are found to be abundant on corn land, the use of the poisoned bait is recommended. This may be prepared as follows: Mix 50 pounds of wheat bran, two pounds of Paris green, and six finely chopped oranges or lemons. Then bring the whole mixture to the consistency of a stiff dough by the addition of a cheap molasses, such as is used in cattle rations, adding water when necessary. Distribute this bait over the infested field in small lumps, taking care to sprinkle it sparingly around each hill. In case bran cannot be readily obtained, middlings or alfalfa meal may be successfully substituted. In fields known to be infested, the distribution of this bait should be started as soon as the corn begins to

appear above ground so that the cutworms may be eliminated as quickly as possible and the injured hills promptly replanted. During the warmer spring months cutworms do most of their feeding at night and burrow into the soil to the depth of an inch or two during the day, so that the bait will usually be more effective if applied during the late afternoon or early evening hours.

Frequently cutworms migrate to cultivated fields from adjoining grassland, and in such cases the crops can be protected by running a narrow band of the poisoned bait around the edge of the field or along the side nearest the source of infestation. —*Weekly Newsletter*—U. S. Dept. of Agriculture.

The Confession of an Amateur Gladiolus Grower.

Some sixteen years ago I graduated from one of our leading high schools and began teaching at once in a country school at thirty dollars per month. Remaining there three years, I was employed as principal of a nearby city school at fifty dollars per month. Six years after this I was called to the principalship of a high school at \$625 per year which necessitated my Board of Education raising my salary to this amount to hold my services.

In the meantime I had my life insured for \$2,000; attended summer normal seven summers, got married and erected a home at a cost of \$2,000. This five room cottage was furnished at a cost of \$967.75.

This put me in debt \$1,000 and an insurance policy to keep up. After the Building and Loan and insurance were paid I had about \$325 to live on per year.

But I must beautify my outside surroundings and have cut flowers for my home. So I began at once the study of all the old catalogs, pamphlets, magazines, etc., that I could find. I got catalogs from many of the leading companies and studied these. How gripping these subjects were to a man who is ashamed now to confess that he did not know one flower from another. I thought of my school days and studied these papers like a text-book. My "hobby" was roses. I knew what I wanted but my money for this purpose was so limited. I watched the magazines and catalogs for bargains. In one year's time I had thirty-six varieties of hybrid teas growing in my back yard for trial. But I knew the old time rose

was unsightly when not in bloom and as the hybrid teas got along very slowly, I decided to grow something among my roses to beautify my bed when the roses were not in bloom. I remembered of having read an article recommending certain flowers for this purpose and I proceeded to go through all my files to find this article.

Here is where the real story begins. The article recommended the Gladiolus. But what is the Gladiolus? I had never seen or heard of it. There was something fascinating about it. (The pronunciation I suppose.) I at once consulted my catalogs like a school master does his dictionary. I found that *America* was highly recommended in every catalog. But, oh! the price! fifteen cents each, one dollar and fifty cents per dozen. This was the spring of 1913. I got from H. A. Dreer, Inc., four bulbs: *America*, (15c.); *Baron Hulot*, (18c.); *Princeps*, (12c.); *Canary Bird*, (15c.).

Imagine a man who had read everything he could get on the subject of the Gladiolus, looking down upon an exhibition bloom of *America* for the first time. Many people came to admire this beautiful bloom and many were the requests for bulbs, but I could give them a catalog only. But a better day was coming. In the fall I received the usual number of catalogs but the price of *America* was still high, No. 2 selling at 75c. per doz. I visited my town florist. While there I picked up a florists' trade paper and happened to find the bargain ads. At the lower prices, I was able to purchase 220 bulbs in the spring of 1914. I sold the blooms at 50c. per dozen. I reinvested the money I got for my cut flowers in bulbs and in the spring of 1915 I planted 1720 bulbs and one pint of bulblets which I had accumulated. Did I sell the bloom? I certainly did. I furnished two florists all my cut flowers. At one funeral I furnished 240 blooms of *America*, *Glory*, *Princeps*, etc. I am now re-investing the money from cut flowers in *Peace*, *War*, *Glory of Holland*, *Willy Wigman*, *Lily Lehmann*, *Europa*, *Pendleton*, etc., and for the spring of 1916, I have over four thousand bulbs for planting, besides five gallons of bulblets all from named varieties and of my own raising.

I now read THE MODERN GLADIOLUS GROWER, and must confess that it is the best paper published. I study it like a text-book.

But where are my roses? They are asleep.

A SUBSCRIBER of Wilmington, Ohio.

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
PUBLISHED MONTHLY ON THE FIRST OF THE MONTH BY
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Special favors to none, and a square deal to all.

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Vol. III.

May, 1916

No. 5

Business Announcement.

THE MODERN GLADIOLUS GROWER is now in its third year and that it has been cordially received we believe we can truthfully say; but whatever success the little magazine has attained has been as much owing to the loyal and friendly support accorded it by subscribers as to anything which we personally have contributed and, therefore, we take this opportunity of thanking our friends who have been so liberal in patronage and assistance and to solicit a continuance thereof.

As we have suggested from time to time, it is our intention to secure and print matter concerning other outdoor flowers and bulbous plants. Attention will be especially given to bulbous plants, and while no distinct promises can be made as to what may be expected along this line, yet these features will be added as we find it practicable.

Having in mind these improvements and in view of the further fact that the cost of publishing is increasing, a larger income is necessary in order to put the publication on a sound financial basis. THE MODERN GLADIOLUS GROWER was really not established as a commercial enterprise, but was undertaken because of the enthusiasm of the publisher for this

particular flower. While enthusiasm is all right enough in its place, it will not pay printer's bills and other expenses incidental to publishing.

Beginning with July, 1916, the subscription price will be 75c. per year or three years for \$1.50 (Canadian and foreign subscriptions 25c. per year extra.) To give old subscribers the advantage of present rate we will accept until July 1st advance subscriptions paid for three years or more in the future, at the present rate of three years for \$1.00.

January 1st, 1917, our advertising rates will also necessarily be somewhat advanced, but the increase will not be large. Definite announcement will be made later.

It is our earnest hope that our friends will understand that the reason for these changes is to insure the continuation of THE MODERN GLADIOLUS GROWER as a regular and permanent thing and that they will continue the unselfish support which has been given it in the past.

MADISON COOPER.

We are in need of good photographs suitable for illustrating single varieties of Gladioli on the front page of THE MODERN GLADIOLUS GROWER. Photographs of varieties which have been well introduced are especially desired. Any of the

older varieties which have not already been illustrated would be extremely acceptable. Any one having such photographs will confer a favor by sending them to the editor. A single spike or group is equally usable. Clear prints showing the form and marking of the flower distinctly are difficult to obtain and are especially desired.

We have had so many communications regarding cutworms that we are pleased to print on another page an article on this subject from *The Weekly News Letter* of the United States Department of Agriculture. This is the most complete treatise on the cutworm that we have seen in print and it will at least be useful as giving the life history and habits of this pest.



This bed, 18 x 40 ft., had in it about 2500 corms, mostly planting size. They were planted in ten double rows, the rows being about 22 in. apart.

To support the spikes I used strips of waste lumber from a nearby planing mill, driving three stakes at the ends and in the middle of the long row and nailing the strips to these as shown in the picture.

I then used ordinary wool twine, fastening same to the strips and running it on each side of the double rows. Every foot or thereabouts I tied the two strings together. This gave stability to the support. A boy in my employ tied the plants in this bed at small expense in a few hours. The outcome was wholly satisfactory.

H. M.

Gladiolus Corms.

Even the gardener is often unaware of what is taking place in the soil about his plants. That many interesting things are happening there may be assumed from the behavior of the *Gladiolus* corms. A majority of those who plant *Gladiolus* "bulbs" in spring have the impression that the stalk and ultimately a spike of flowers will rise up out of the underground part just as the tulip flower grows from a tulip bulb. But the *Gladiolus* has a very different method of growing. The flower spike does not come from the corm planted. Instead, when the corm begins to grow, it forms one or more corms upon the old corm and not until after these are well

developed and the old corm practically drained of its substance, does the flower-spike push up. All corms, of course, are regarded as short, upright underground stems, and the new corms are in the nature of branches. Whether the flowers spring from the old or new corm depends entirely on whether the food is transferred before or after flowering. While the new corms are carrying on their work, other smaller bodies called cormels and intended for reproduction are being formed at the base of the new corms. These cormels are often borne on short stalks somewhat like tubers are borne in other plants and serve to indicate the general relationship that exists between all underground stems. —*American Botanist.*

WAYSIDE RAMBLINGS.

AMATEUR OR PROFESSIONAL.

The action of the Gladiolus Society of Ohio at its last annual business meeting by which it determined in the preparation of its next premium list to disregard the distinction heretofore observed between the classes of growers and exhibitors known as amateurs and professionals, is calling forth some comment, both of approval and of censure. As Secretary of the Society, and in hearty accord with its action, which was the result of full consideration, and adopted without a dissenting vote, I may perhaps be allowed to contribute to the discussion.

In the first place, let me say that this action is to be regarded as experimental—not necessarily final. Our laws are not like those of the Medes and Persians, but are subject to reconsideration, to reversal, even, if good reason should appear, and because of this we welcome the interchange of views thus brought out. It is becoming increasingly apparent that the working of the old-time plan is not wholly satisfactory, and, in taking this step, our society is simply placing all exhibitors on the same broad level without distinction or discrimination of any kind. Should reason appear for special favors to be shown some growers over others, we are ready to learn. We have felt that the whole matter has been in need of investigation, and possibly of change. It might be pertinent to such investigation, and perhaps lead to a better understanding of the situation, and at any rate would be a good starting point to inquire into the reasons for such a distinction, and to whether this be a natural and practical classification, or merely an artificial and arbitrary one. So far, it seems that the latter is the case.

For what, really, makes one grower an amateur? And wherein lies the difference between him and the so-called professional? Many of our growers have wrestled with this question, without reaching a harmonious conclusion. The line of demarcation seems as indefinite as the boundary of a petty State in Europe in war time. Everything depends upon definition, and it appears that a really satisfactory definition has not yet been reached. Every one has his own ideal in regard to the line of demarcation, and all the others have objections to it. Probably the most nearly acceptable proposition that has yet been offered is this: "An Amateur is one who grows for pleasure only—A Pro-

fessional grows for profit only." Theoretically, this might be accepted as a fairly satisfactory definition. Practically, however, as with many another theory, it is in the application of it that the trouble begins. Where is the professional who does not derive pleasure, and where the amateur who never seeks any profit from his occupation? Is it not true that very many, perhaps nearly all, who are now reckoned in the professional class began their career as amateurs? Who can say just when they burst the chrysalis and came forth as full-fledged professionals? Did the first sale or exchange of a few roots or bulbs or seeds place them unwittingly on the other side of the line? Or, if not, just how long must this selling be carried on, to effect this result? Many and widely varying opinions develop in the study of this question, and it is safe to say that it is not settled yet. Before we contend too fiercely would it not be well to understand just what we are striving about?

But, to go a step farther, even were the distinction made quite clear, and were it undisputedly a real benefit to our industry that it should be recognized and enforced, still nothing is better established as an actual fact, than that it has not been strictly followed out, even in the work of those who insist most strenuously upon its retention. I might simply refer to the experience of exhibitors everywhere, to corroborate this. The exceptions have become so frequent as to make the rule of little effect. I am not now to be understood as making charges against any one, but as simply stating a fact that ought to be, and probably is, evident to any one who will take the trouble to look into the matter. Whether the classification, or the management, or both, should be held responsible, each one must judge for himself. Our Society believes it better to abolish the rule than to nullify it by constant disregard. The separation of exhibitors into the two classes stands out plainly enough upon the printed page, but look a little farther and see the bars down and the gate wide open between the two. There are a plenty of amateurs in the professional class, and of professionals in the amateur list, and I can testify from my own official experience that sometimes the same exhibitor appears in both. The question might be raised, which is he? Or can a grower be both? Truly, it has sometimes seemed that the determining point in the exhibitor's mind is, not that he shall be in the class to which he properly belongs, but in the class where appears the greatest likelihood of carrying off the prize. Now the result of

this is that we have had a fictitious classification that does not classify.

I take especial notice of two points brought out by a study of the situation. First: Amateurs themselves do not fear to compete with professionals. On the contrary, they do in large numbers exhibit in that class, even preferring it, as it would seem, to their own. And they do not compete unsuccessfully, either. Now this very fact completely invalidates the argument of those who contend that the amateur should have some special consideration shown him in competition with other growers. It is certainly a mistake to suppose that amateurs are at a disadvantage in the show ring, or that in order to equalize conditions and free them from a supposed handicap, they should have some concessions made to them as a class. In some respects the contrary is much nearer the truth. Often have I heard the opinion expressed by growers of large experience, that the amateur has a real advantage over the professional, just as any small grower has over one who spreads his efforts over a large area. The better culture and personal care and attention which come within the reach of the small grower are not possible to the large cropper, no matter what be the crop grown. There is no call for pity or concession to the amateur, as such. He can take care of himself. And if it were ever true, as it probably once was, that the professional should extend favors to the amateur for his own sake, thus to cultivate a market for his stock, this reason is of no force at this time, when nearly all large growers sell their stock at wholesale to middlemen, and retail catalogue dealers, and so have no direct relation to the amateur at all.

In the second place: It is equally evident that professionals do not always refrain from competing in the amateur class. Strictly speaking, they ought not to do this, and yet, sometimes they do. In making entries, it is, of course, left to the exhibitor to designate where his entry shall appear, and the clerk or other official who records it is not supposed to know his proper class, or to presume to inquire into it, unless a contest be made. Nor, if he should have personal knowledge of the status of the would-be exhibitor, would he ordinarily refuse an entry on such grounds, as the practice is now so common. But the mutual interchange here noted between the two classes simply defeats the very end for which the classification was made and renders it a mere pretense.

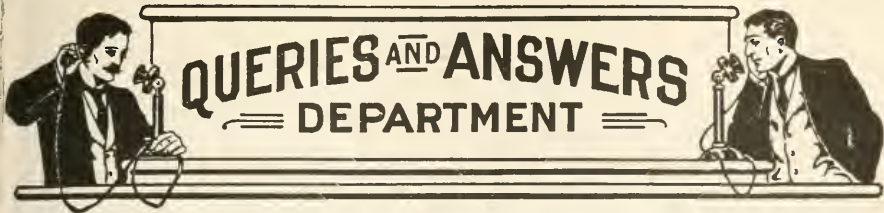
Besides this, the status of the amateur

and as well, the relation of the professional to him, is no longer what it once may have been. I suppose the traditional idea called up in the mind when the word "amateur" is spoken, is that of some poor housewife, whose love for flowers is the one bright spot in her hard life, or perhaps, some children whose struggling love of beauty impels them, with little of skill or knowledge, to attempt to brighten their home with some choice flowers in border or garden path. It is a beautiful and touching ideal, and it might have been true once, but it is so no longer. In the amateur class to-day are the well-to-do country dwellers, the more wealthy city residents, and the opulent ones who have their private parks, cared for by professional gardeners, who grow their own hot-house fruits and rare flowers, and who are much better able to seek out and secure every fascinating novelty than are any of the professionals, who, poor fellows, cannot grow merely for pleasure alone. From these wealthy, sometimes millionaire amateurs, the ordinary country grower who most closely corresponds to the true ideal of an amateur, needs protection much more than he does from the professional class. And yet, by the rules as at present held and administered, they are in the same class, and these wealthy growers, who are simply making a fad and pastime of this, as of many other things, are enabled to stand at the top of the list and carry away the prizes. And where does the real amateur come in?

In view of all this, I am heartily in accord with the action of The Gladiolus Society of Ohio. I believe it is blazing the way for a better method of administration in coming years. The specific course adopted may be open to amendment, but in following it we shall stand four-square to the world, with equal terms and fair dealing to all. It seems to me that our prizes should be awarded to the exhibit, and not to the exhibitor, and competition should be as free and fair and open as it is possible to make it. I might quote here the words of one of our leading growers who is classed as a professional by the accepted ruling, and who has held the highest honors in his own organization: "Make competition free to the world, and let merit win." At any rate, that is what the Gladiolus Society of Ohio intends to do in the coming year, and time will make plain whether this is wise or otherwise.

WILBUR A. CHRISTY.

Bound volumes I and II of THE MODERN GLADIOLUS GROWER cost but \$1.00 each.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]-EDITOR.

Offsets on Gladiolus Roots.

On taking up my Gladiolus bulbs last Fall I found nearly all of them had multiplied from two to five corms each, but I found a few that only had one corm, but had heavy roots, and on the ends of these roots were little cormels about the size of large pop corn and as many as twenty-five on a single corm. Should these be left on the parent corm for planting? Will they be all one color, and will seed raised on a yellow bulb produce all colors?

MRS. C. W. W.

Answer:—Many varieties of Gladioli do not make offsets or cormels, neither will they make divisions, consequently they are not considered of much value. No matter how fine the flower and color may be, such bulbs are usually thrown in the mixtures by the growers and sold. Generally in a few years they become exhausted and die, and are thus lost. Other varieties multiply by division of the large corms almost exclusively, while others will increase by division and by offsets or cormels. The latter are considered the more valuable from a commercial point of view, as a large stock may soon be accumulated from varieties having this habit. Just why some varieties make large numbers of offsets and others but few, or none at all, is one of the mysteries of nature. Each year a new bulb or bulbs are formed above the old one, or mother bulbs, which dies after it has completed its work of nurse to the offspring. The cormels are formed between the old and new corms. The old or mother corm is no longer of any value, and should be separated from the new root, and thrown away. This work is usually done two or three weeks after digging in the Fall, at the time of cleaning, as it is termed. The small bulblets are separated from the blooming bulbs and should be stored in a cool, dry cellar or anywhere away from heat and frost. The cormels should be planted as early in Spring as the ground can be worked. The soil should be reasonably fertile, but contain no fresh manure. The planting may be done in the same manner as garden peas and should be sown in the drill quite thickly, about 100 to a foot of row. The rows

should be at least 18 inches apart. The young plants must be kept free from weeds, and should be frequently cultivated up to about August, when cultivation may be discontinued. A few of them may possibly bloom the first year, and nearly all will do so the second year, while a few of the weaker ones will not bloom until the third year.—*Rural New Yorker*.

Planting Cormels.

TO THE EDITOR:—

I am a subscriber to THE MODERN GLADIOLUS GROWER and have noticed items concerning the depth for planting cormels. I have not, however, observed anything telling about how thick they should be planted. Would it be too much trouble for you to give me the proper way to plant cormels both as to spacing and depth?

W. H. P.

Answer:—The depth at which to plant Gladiolus cormels has not been definitely settled even among the oldest and most experienced growers. Some prefer to plant rather deep on account of moisture to secure best germination, but others plant more shallow as a benefit in digging and also to get quicker growth in the spring. Our personal preference is for a depth of about three inches and we plant in a wide trench made with a hoe and cover the bottom of the trench almost solidly with the cormels. We are quite aware that this does not give the best development or growth the first year, but some growers claim that thick planting increases the percentage of germination and certainly the sprouts do better when coming up thickly. Most growers plant in a single trench and much the same as would be used in planting peas and at a depth of from 2 to 3 inches, sometimes even more shallow than this. Thin planting, say half an inch to an inch apart, results in a much larger corm the first year from bulblet, but there is no doubt but what thick planting results in a higher percentage of germination and also there is a large saving of labor at digging time as well as a saving in space in the garden.

Gladiolus Corm Diseases.*

BY L. M. MASSEY, Instructor in Plant Pathology, Cornell University.

GROWERS who have examined the condition of their stored corms from time to time during the winter months will have noticed the gradual decay of a few or many of them. At planting time some are found to be in various stages of decay, many having been reduced to dry mummies. The uselessness of planting the latter is obvious, but the grower will be at a loss to know what to do with, or what to expect from the planting of those corms which, although diseased, still show evidences of having sufficient vitality to sprout. Various treatments for diseased corms have been advocated, many of which have been tried by growers and others interested in experimentation and found to be of no value. The writer feels that some of the results of experiments conducted during the past four years for the control of Gladiolus corm rots ought to be given at this time in order that growers may profit by them and be influenced not to apply some suggested treatments on a large scale which in experiments have given no indication of being of value.

There are at least three diseases of the Gladiolus of general and common occurrence. These have been called hard rot, dry rot, and scab. The first two are caused by parasitic fungi, while the cause of the scab disease is unknown. The latter disease (THE MODERN GLADIOLUS GROWER, Vol. II, page 99) is fortunately the least important of the three. The disease is characterized by more or less circular saucer-shaped, concave areas on the surface of the corm, the line of demarcation between healthy and diseased tissue being sharply defined. The lesions frequently have a pronounced metallic luster, giving one the impression of a thin metallic film being spread neatly over the depression. The lesions on the corms do not increase in storage, and it is rare to find a corm so badly affected that its vitality has been materially reduced.

Turning now to the hard rot and dry rot diseases, entirely different types are encountered. It is the opinion of the writer, based upon actual contact with

the Gladiolus industry throughout the past four years, that these two diseases are responsible for the greater part of losses due to disease. In practically every case where rotted corms have been sent to the writer for examination, the trouble has been definitely proved to be one or the other, or both, of these diseases. Unlike scab, the hard rot and dry rot diseases are characterized by a rotting of the corm, the lesions advancing during storage, frequently to such an extent that many corms are reduced to dry mummies. Others are found to be in varying stages of decay. Some will sprout and produce offspring when planted, while others will die during the growing season due to the decay of the parent corm before the offspring have developed sufficient root system for self-support. Experiments have proved that a diseased corm may be expected in the majority of cases from the planting of one which is diseased.

HARD ROT.

On the leaf—The hard rot disease occurs not only on the corms but also on the foliage. It is commonly found in great abundance on the foliage of seedlings and cormels but has been observed by the writer on the foliage of but six flowering sized plants. Reddish brown spots of more or less circular outline appear during July or early in August. A premature ripening of the foliage occurs, plantations of seedlings and cormels so affected taking on a rusty dead appearance. A closer examination of one of these spots will reveal the presence of numerous minute black bodies which dot the ashen gray center.

On the corm—Hard rot lesions on the corms appear in the autumn as minute water-soaked areas of a reddish brown to brownish black color. It is usually necessary to remove the husks in order to see the lesions. There is no sharp line of demarcation between healthy and diseased tissues. As the spot increases in size the center becomes sunken, the color deepens to a distinct black, and the margin becomes more definite. The sunken area rapidly follows the advancing water-soaked margin, due to drying of the tissue. The affected tissue becomes very hard, making it difficult to cut it with a

* This paper is abstracted from a technical bulletin to be published by the Cornell University Agricultural Experiment Station but which will not be ready to distribute until too late to be of value for the season of 1916.

sharp knife, and can usually be chipped out with the finger nail.

CAUSE OF THE HARD ROT DISEASE.

Septoria Gladioli Passer., a fungus pathogene, is the cause of the hard rot disease of the Gladiolus. It was first reported in Italy in 1874 as occurring on the foliage of *Gladiolus segetum*, but has never been reported in this country. The minute black bodies referred to above as occurring in the lesions on the leaves are flask shaped chambers within which are born the spores of the fungus. These spores are blown about during the summer and fall upon other Gladiolus plants where they germinate under suitable conditions and produce new infections. The high percentage of infected corms in a plantation of seedlings or cormels whose foliage bears lesions indicates that spores are also washed down to the corms where they germinate and produce infection. The fungus is not dependent upon the production of spores for its perpetuation. Minute bits of the mycelial threads which work their way between the cells of the host plant have the potentiality of growth. No spores are produced in or on the corms, and yet the offspring from a diseased parent become diseased regardless of whether or not the corm has been treated with disinfecting solutions. The fungus does not work directly from the old corm into the new one, but either works along the sheathing leaf bases or else grows first out into the soil from whence it attacks the newly developing corm. Experiments also indicate that the fungus is able to live in the soil for at least four years without the presence of the host plant.

DRY ROT DISEASE.

Only corms and cormels have been observed affected with this disease. The lesions have a definite slightly elevated margin. The color of the diseased area varies from a chocolate brown to a brownish black, the center is sunken, and the tissue is punky in texture. Corms usually show numerous more or less circular lesions which vary from one-fourth to three-eighths inch in diameter. Frequently these lesions coalesce to form one large lesion, but even then the outlines of the individual lesions may be traced. There may be a single large lesion which involves half or more of the corm. The tissue gradually dries out until in advanced stages a dry, punky mummy remains which in the previous autumn may have appeared to be a healthy corm.

CAUSE OF THE DRY ROT DISEASE.

The dry rot disease, like the hard rot disease, is caused by a fungus pathogene. Since no spore form has been found, no name has been given to this parasite. Like *Septoria Gladioli* Passer., the fungus works along the sheathing leaf bases from the diseased parent to the developing offspring, or else grows out into the soil from the diseased corm from whence it attacks the offspring. The dry rot fungus like the hard rot fungus, is able to live for at least four years in the soil without the presence of the host plant.

CONTROL.

It is in this phase of the subject that growers are primarily interested, and the control of a plant disease is the goal towards which the plant pathologist is working. But plant disease control in the great majority of cases is only possible after the cause of the disease has been determined and, in event the trouble is due to a fungus, the life history of the organism worked out. This in the case of the diseases of the Gladiolus has been a task of surprising magnitude and has taken an immense amount of time and study. Much has been accomplished. Much remains to be done.

SCAB.

Sufficient corms affected with this disease have not been at the disposal of the writer for experimentation. Attempts to locate the cause of the disease have failed. Some growers claim to have obtained good results by treating corms affected with the scab disease with a solution of formalin. Other growers claim to have so treated their corms with absolutely no results. Further experimentation upon this disease is essential before recommendations for control can be made.

HARD ROT.

Experiments during the past three summers have shown that the hard rot disease on the foliage can be controlled by spraying with a standard solution of bordeaux mixture. Spraying should be begun about the middle of July and followed by seven or eight other treatments at intervals of about seven days. However, a simpler and far more efficient method is to plant the seed in soil in which Gladioli have never been grown. When this is done and care is taken not to carry parts of diseased plants or soil bearing the fungus to these seedling plats, a disease free crop will result. No grower who is troubled with this disease can afford to use the same ground for a

seedling bed more than one year. Doubtlessly the disease on the foliage of cormels could be controlled by spraying with bordeaux mixture, but it would be a large and expensive undertaking, especially for those who grow many acres of cormels each year. The foliage of flowering sized plants usually escapes infection.

HARD ROT AND DRY ROT DISEASES ON THE CORMS.

With the exception that no spore form of the dry rot fungus has been found, the life history of this organism does not differ materially from that of the hard rot organism, so that a treatment of value in controlling one disease ought to be effective against the other. Consequently the following experiments have been directed towards the control of both diseases:

A.—SOIL TREATMENT.

Since the hard rot and dry rot fungi are able to live from year to year in the soil it was thought that some treatment might be given the soil which would eradicate these pests. Soil in which Gladioli had been grown for several years was treated with the following chemicals in about 1/32 acre plots at strengths as high as growers could afford to use them: lime, lime and sulfur, sulfur, sulfate of iron, and acid phosphate. Similar areas were left untreated for checks. None of the treatments proved of value in reducing the amount of disease in the offspring of the corms which were planted in the treated areas. The experiment was repeated on a smaller scale and it was found that these chemicals failed to protect the offspring of healthy corms from disease, even when the planted corms were entirely covered with the chemicals. In the latter experiment some injury resulted to the corms. Even formalin as a soil drench failed to give satisfactory results, but it is possible that in this case the experimental plats were not far enough removed from other plats to eliminate all possibilities of untreated soil being carried to the treated areas. However, growers could not afford to use formalin as a soil drench on a large scale.

B.—CORM TREATMENTS.

Selected healthy corms have been grown during the past four seasons in soil in which no Gladioli had ever been grown, without a single corm becoming diseased. That infection takes place in the soil and not in the storage house is indicated by the fact that these corms were stored throughout each winter in a room containing diseased corms. Rigid and painstaking care must be exercised in the selection of healthy

corms. The husks or sheathing leaf bases must be removed and any and all corms rejected which show any signs of disease. A single diseased corm may serve to infect the soil and other corms. The selection should be done as near planting time as possible, for whereas a corm may be infected in the autumn at digging time and still show no evidence of disease, the lesion is sure to be noticeable by planting time. Previously to planting these corms it is advisable to treat them with a five per cent solution of formalin for thirty minutes to kill any parts of the pathogenes which may be clinging to them. After planting in soil in which no Gladioli have been grown, care must be taken not to carry foreign soil or diseased plant parts to this area.

Obviously the selection of healthy corms which are planted in soil in which no Gladioli have ever been grown is a slow and somewhat undesirable method. The additional expense, the carelessness of workmen, and the extra amount of land or the inability of some growers to obtain land in which no Gladioli have been grown—or at least for many years—are important factors to be considered. However, this method is one which will unfailingly give results, and doubtlessly can find some application by all growers. Large growers can adopt the plan in part, and small growers ought to have little trouble in following some such scheme. If the grower cannot afford to or feels disinclined to discard the diseased corms, these can be planted separately and the healthy ones selected and separated from them from year to year.

SPRING TREATMENT OF DISEASED CORMS.

When lots of diseased corms which received no treatment were planted in soil free of the pathogenes, it was found that from thirty to seventy-eight per cent of the offspring became diseased. Corms bearing lesions have been treated previously to planting as follows: (1) With formalin at the rate of one pint of commercial formalin to 15 gallons of water for 18 hours. (2) With corrosive sublimate, 1 to 1000 solution, for 18 hours. (3) With chemicals, in which the corms were rolled and after being set in the rows all corms covered with the chemical in which they were rolled before covering them with soil. The chemicals used were sulfur, air-slaked lime, acid phosphate and soot. None of the treatments were of value in reducing the percentage of disease among the offspring.

AUTUMN TREATMENT OF DISEASED CORMS.

Since the lesions are smaller in the

autumn, the following treatments were given diseased corms immediately after digging, after which the corms were cured and stored as usual: (1) Formalin, at the rate of one pint of commercial formalin to 15 gallons of water for 18 hours. (2) Corrosive sublimate, 1 to 1000 solution for 18 hours. (3) Formaldehyde gas, generated by the potassium permanganate method at the rate of twenty-three ounces of permanganate crystals and three pints of commercial formalin for five hundred cubic feet of space for 48 hours. (4) Water at 50° C. for one-half hour. (5) dry heat at 50° C. for 1½ hour.

None of these treatments proved of value in reducing the amount or extent of the disease, although some of the treatments were so severe as to cause injury to the corms.

SANITATION.

Experiments have shown that the hard rot fungus is able to live over winter on dead tops left lying about on the ground. It follows that these tops should be raked up in the fall and burned. This suggestion applies particularly to the tops of seedlings and cormels, since the disease has been observed by the writer to occur on the foliage of but six flowering-sized plants. Since the hard and dry rot fungi live over winter in the soil, care should be taken to see that the soil does not become infested with these organisms. Plant only healthy corms in soil which it is desired to keep free from these fungi. No badly diseased corms should be planted, as they will but decay in the soil and infect it with the disease-producing organism. Crop rotation should be practiced.

Double Gladioli.

Referring to the mention in the April number of a double Gladiolus, Ernest Branton, California's leading authority, says: "Each year, among seedlings from the interbreeding of many divergent garden types, will come some double flowers, and many of these persist in producing doubles each succeeding year. By crossing these doubles it is doubtless quite possible to fix this character so that a portion of each crop of seedlings in successive generations will come double. But is it particularly desirable to have such types for garden use? These doubles frequently occur in any seedlings, a mere freak of nature." Also the yellow variety, *Golden King*, frequently shows double flowers, sometimes 15 to 20 petals on the same spike with normal flowers. C. M. S.

If you have never grown Gladioli from seed begin this spring. You will find full directions in past issues of THE MODERN GLADIOLUS GROWER. If you have no seed or do not know where to get it write our advertisers. Some of them may have it. If not write the editor.

Many of your seedlings will be poor or inferior, but a good percentage will be fine and you may secure a prize in the way of something superior to anything among your named varieties.

CLASSIFIED ADVERTISING.

Growers having surplus stock for sale will find this department effective in disposing of it. Five lines (about forty words) \$1.00 per insertion. Additional lines 15c. each.

W. E. KIRCHHOFF CO., Pembroke, N. Y., growers of the finest Gladioli, such as Pendleton, Panama, Niagara, Pink Perfection, Europa, Mrs. Fryer, War, Peace, etc. Correspondence solicited.

GREAT OPPORTUNITY—Send one dollar or five, any amount, and I will send you the greatest value in bulbs, plants, and rose bushes you ever received. This is our annual cleanup offer. A great bargain. The more you buy the more you save. Act immediately. SUMNER PERKINS, Danvers, Mass.

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ANNOUNCEMENT

We want to thank our many customers,
whose orders we have received through
The Modern Gladiolus Grower, and others
for their liberal patronage.

WE STILL HAVE a limited number of this season's catalogs (of our second edition), which we will be glad to send to interested persons, but regret to announce that we are already "sold out" of many varieties of gladioli listed in our 1916 catalog. We will not be able to fill any more orders for this season; in fact a considerable portion of the orders we have already received cannot be entirely filled.

Our planting this spring will be greatly increased, and we hope to be in a position another season to fill all our orders. However, as our sales have more than doubled each year since the public has become acquainted with the wonderful new "Gladioli Kunderdi," it will be to our mutual advantage to be favored with your application for 1917 catalog as early as possible.

In our 1917 catalogue we will list some remarkable new varieties, offered only by us and for the first time. These will consist of the choicest of new selections from both our orchid flowered ruffled and plain petaled strains and the grand new Primulinus Hybrids, of Kunderdi Types.

A. E. KUNDERD,
ORIGINATOR

Goshen, - - - Indiana

THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.
Published Monthly by Madison Cooper, Calcium, New York.

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JUNE, 1916

No. 6

GLADIOLUS—*ISABEL*.

It is exceptionally pure white in color, but each petal has a faint dot of pale pink deep in the throat.

A very slow increaser and it has never been valuable commercially for this reason.



Isabel was grown by Matthew Crawford from seed procured from H. H. Groff about the year 1895. Out of 14 ounces of seed in the lot *Isabel* was the only variety secured which was ever named.

The Gladiolus Manual.

By W. W. WILMORE, JR.

CHAPTER XIII.

Growing Commercially.

COMMERCIAL growing has become a great enterprise both in America and Europe, and millions of corms are grown for market annually, their value amounting to millions of dollars. Holland produces more Gladioli perhaps than any other European country, followed closely by Germany, France and England. Other countries grow them to some extent but those mentioned are the greatest producers. America has perfected itself in the art of growing Gladioli, and I cannot call to mind a single locality where the Gladiolus has proven a failure. In fact, it is the only bulb of commercial consequence that has proven itself a true American enterprise. We, therefore, should take precaution that this industry is not overdone by foreign growers and importers finding an outlet for their surplus in this country. True it is that they can produce this corm and market it for less money than we on account of their cheap labor but other than this we have all the facilities and perhaps more for growing.

In 1912 a petition was circulated by the leading growers of this country asking Congress to raise the duty on this class of bulbs. It seems that it was ignored however as the duty which is 50c. per 1000 has never been changed. We could well afford to pay five times this amount to protect our own growers. It is only natural that we should buy newer introductions and varieties which are new from foreign countries, but it seems wrong and an injustice that standard varieties should be imported when the markets of this country are flooded. All growers will do well to work hand in hand to this end.

It is a known fact that one American grower who is credited with introducing two or three of the best Gladioli of the day, sold his small stock to certain Holland growers at a price much lower than it could be obtained from him at home. The consequence was that by the time our American growers had obtained a stock large enough to begin selling the Hollanders were overstocked and began cutting the price and shipping back to this country at a price less than one-half the market price here. This also seems an injustice which we hope will not be repeated again.

As to home growing, only the best varieties should be considered. We have many inferior varieties which should be eliminated from commerce. From the thousands of varieties which are in prominence little or no trouble is encountered in selecting good varieties to grow.

We also make a mistake by growing too many varieties. One hundred varieties would be enough for any one grower to list although several list double this number. A good grower continually tests new varieties and discards those that prove inferior to the new, at all times keeping his list as low as possible. We should not bore the public by offering them a long list of names to read asking them to select their varieties for planting. If descriptions were exact by all growers this might be overcome but that which one calls pink another calls rose and so on. We, therefore, should be careful to describe a variety as accurately as possible. Colored charts have been introduced for this purpose but are used by few. The American Gladiolus Society as well as other national societies have adopted colored charts by which to describe a certain variety, and if the introducer would first send his seedling to one of these societies for description and then others follow it, we would find that a great deal of trouble would be avoided.

Another mistake is made by large growers who advertise their surplus stocks below market prices. It would seem that cut rate prices should be treated as private business and not advertised.

Another thing which is detrimental to the business is the sending out of unknown varieties under new names. This in time becomes confusing, giving a variety two or more names. A substitute should never be offered unless the true name is plainly marked and given. It then will be sold again for what it is. There have been instances where mixtures have been separated and the varieties renamed. This has caused more than one variety to sail under false colors.

Growers should be particular to keep all mixtures or rogues from their stocks. This should be done at blooming time by pulling up all undesirables. Do not send

out diseased stocks or those which appear bad.

Orders should be neatly packed and shipped in light boxes. Be considerate of the fellow who pays the freight or express charge. Always pack to resist frost and insure safe arrival.

[Continued next month. Chap. XIV—"Growing for Cut Flowers."]

Ashes and Hen Manure.*

No question comes to the Ohio Experiment Station more frequently than how to use ashes and hen manure to the best advantage in fertilizing the soil.

Unleached hardwood ashes should contain about 5% or 6% of potash with 1% of phosphoric acid. But potash seldom produces its full effect unless used in connection with more phosphorus than is contained in ashes and, therefore, ashes should be mixed with some such carrier of phosphorus as acid phosphate or steamed bonemeal. Two hundred and fifty pounds of unleached ashes and 180 pounds of 16% acid phosphate would carry as many pounds of phosphoric acid and potash as would be found in 300 lbs. of a 10-4 fertilizer.

Ashes are about one third lime and the addition of lime to acid phosphate causes the reversion of part of the phosphorus from the water-soluble to the citrate-soluble form, but this is no longer considered a serious matter. There is usually sufficient lime in the soil to cause this reversion, and if there is not, there should be, because this quantity of lime is essential to full crop production. For example: at the Ohio Experiment Station 320 pounds of acid phosphate has increased the value of crops by \$15.20 on unlimed land, and by \$24.20 on limed land, over and above the cost of the acid phosphate and the lime, as a 10-year average.

A ton of fresh hen manure should contain about 22 pounds of nitrogen, 20 pounds of phosphoric acid and 10 pounds of potash as a general average. When air-dry, hen manure should contain about 40 pounds of nitrogen, 40 pounds of phosphoric acid and 20 pounds of potash in the ton. Fresh manure from fattening cattle should contain 15 pounds of nitrogen, 8 pounds of phosphoric acid and 10 pounds of potash per ton, while as a general average, mixed barnyard manure, after exposure to the weather in open yards, is estimated to contain 10 pounds nitrogen, 6 pounds phosphoric acid and 10 pounds potash to the ton. A ton of

dry hen manure is, therefore, worth approximately as much as four tons of average yard manure.

Many persons propose to mix ashes with hen manure, but no material containing lime, in the form in which it is contained in ashes, should be mixed with moist manure, as the lime will cause the liberation of a considerable part of the nitrogen in the manure, and it will escape as ammonia gas. Ashes and dry hen manure may be mixed immediately before applying the manure, as the ammonia will mostly be absorbed and held by the soil.

The proper material to mix with manure is acid phosphate, as this serves to fix the ammonia, instead of liberating it and also reinforces the manure with phosphorus, which is the element most needed by most Ohio soils.

At the Experiment Station, and as a 16-year average, 8 tons of fresh cattle manure has produced increase of crop to the value of \$26.00, the manure being applied to corn in a 3-year rotation of corn, wheat and clover. When the same quantity of manure has been re-enforced with 320 pounds of acid phosphate—40 pounds per ton of manure—the net value of increase, after deducting the cost of the phosphate, has been \$39.00.

Acid phosphate, sprinkled over the dropping boards, will reduce the loss of ammonia and increase the effectiveness of the manure.

A mixture of 250 pounds dry hen manure, 150 pounds acid phosphate and 100 pounds unleached hardwood ashes will contain practically the same quantities of ammonia, phosphoric acid and potash as would be carried in 300 pounds of a 2-10-2 fertilizer.

By using a sand sieve and a wooden pestle to pulverize the manure such a mixture may be applied with the ordinary fertilizer drill, and if the ashes are not added until within a few days of the application there will be no appreciable loss of ammonia.

Coal ashes have practically no fertilizing value, but may sometimes be used with advantage in loosening a compact clay soil, or as a mulch around small fruits in the garden.

Inexperienced growers of Gladioli are somewhat liable in using commercial fertilizer to overdo the matter. Extreme caution is necessary. A quantity of from 100 to 500 lbs., per acre which is commonly recommended, means but a very small amount per square rod. A short calculation in arithmetic will prove helpful.

* Bulletin 359 Ohio Exp. Sta., Wooster, Ohio.

MRS. AUSTIN'S TALKS.

THE CULTIVATING OF GINSENG.

[Continued from May issue.]

At home I related the incidents of our trip, describing the Ginseng garden and quoting the marvelous financial possibilities as narrated by the enthusiastic grower. "The Lad" listened eagerly, and with eyes sparkling in anticipation begged to go Ginseng hunting the next morning, but having never seen the plant, some one had to go with him, and that led to our spending a long delightful day in the

on a board and tramped to free it from its soft pulp, then washed and placed in stratification by alternating a layer of sand with a layer of seed, filling box nearly full and buried in a corner of the garden to remain until time for germination which would require eighteen months.

In the spring our miniature woodland brought into bloom various wild flowers whose roots had been concealed in the leaf mould, and a strong growth of the transplanted Ginseng. The plants had adapted themselves to their environment and were doing better than we had expected. It looked to be no trick at all to grow Ginseng.

"The Lad" was a city newsboy with



View inside of artificial shade, showing the growing Ginseng plants.

woods. He proved a good "Sang" hunter and a plant that escaped those keen eyes was surely well hidden. We brought home a few hundred plants of various sizes, and a nice little bunch of seed. According to the quotations of the grower we had done well financially. The next thing was to make the garden which was decidedly unlike making a garden for vegetables.

The enclosure, eight feet high, was well shaded on east, south and west sides by wide boards, the north side covered with woven wire only. Shade racks for overhead were so made and adjusted to allow a constant change of light. The soil, a rich sandy loam, required only the addition of leaf mould to make it ideal, and worked up nicely into raised beds into which the roots were placed at an angle of 45°, covered to the bud and well mulched. The seed was put in a stout bag placed

an innate love for the beautiful in nature, and one day when his boyish longing for the trees, fields, and waving grasses seemed irresistible, he "jumped a train" and came into the country. He said the chimney-swallows sailing and circling in the air, then diving into the smoky depths of the big chimney, first attracted him to our place, and he reasoned that where birds came into the house, there might be room for him. We hoped he would stay, and thought the Ginseng would help to interest him, but a roving disposition and desire to see the world led him away, and we decided to sell the stock of Ginseng. Being wild root transplanted, and good stratified seed, it sold to good advantage.

The dealer told us that cultivated root was not selling well, that growers in the effort to hasten the growth had enriched the soil too heavily, not only causing dis-

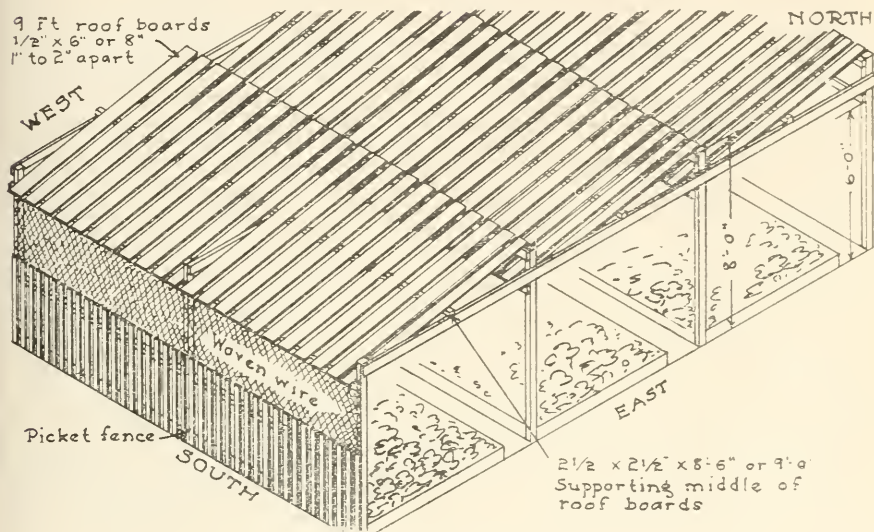
ease but producing long white roots with rings running lengthwise at which the almond-eyed consumer looked askance, and that there was already an overproduction.

The Chinaman still uses Ginseng, and as there is not enough of the wild root to supply him, the cultivated root is always in demand, if it is grown so as to meet his exacting idea of excellence. Owing to disease and improper methods of cultivation a very small portion meets his requirements.

He demands a root that is short and

It will readily be seen that there is no "get-rich-quick" prospect in growing it, but with the improved style of shading, condition of slow growth, control of disease, there is good money to be made.

Ginseng growing has its advantages, with garden properly constructed there are no weeds to pull, no cultivating to do, while the Gladiolus grower toils back and forth in the blazing sun cutting the spikes of bloom, or down on his knees fingers the weeds from the little bulblet stock, the Ginseng grower may read in the cool restful shade, while in the fall he can dig



Artificial shade for growing Ginseng.

thick, the length equal to the circumference or less, rough skinned, with rings running around, not up and down, color preferably gray or yellow, but *must* break white.

The sketch shows late style of ventilated shade. Posts are 3"x4"x10", set 2 ft. in the ground, 8 ft. apart each way, and connected by 1 1/2"x5"x16 ft. stuff strongly nailed, breaking joints, occasionally placing trussed bracing to prevent the tendency to lean with the prevailing winds. Plot well drained. Roots are grown in 6 ft. raised beds, path under drip. Good loose soil of 8 inch depth fertilized on top with commercial fertilizer or *well rotted* barn-yard manure, and mulched well with rotten sawdust or leaves.

Short roots with rings running around come from age and slow growth which indicates mature root requiring about eight years before being ready to market.

and dry the root, store or sell it, and with the birds migrate to a warmer climate. But the poor Glad. grower has to keep on working in the winter months, rooting, sorting, and selling his stock, and if he *once* forgets to close the storage door in severe weather his crop is gone.

Who would not be a Ginseng grower?

MRS. A. H. AUSTIN.

I am indebted to Mr. Elgin Hinman of Atwater, Ohio, for the illustration and sketch, and most of the facts on Ginseng culture in this article. He has a very interesting garden of over 100,000 roots. Mr. C. M. Goodspeed, of Skaneateles, N. Y., the only white man who exports Ginseng direct to China, kindly furnished me copies of *Special Crops*, a magazine especially devoted to the culture of this interesting plant.

While all are not interested in Ginseng, to those who are, Mrs. Austin's continued article will prove valuable. We regard it as exceptionally fair and accurate and written from the standpoint of one who knows.

Gladioli in the All-Summer Bulb Garden.

E. I. Farrington, in the *Countryside Magazine* for April, in an article entitled "An All-summer Bulb Garden," speaking of Gladioli has some useful suggestions as follows:

Gladioli are now enjoying a popularity which has been growing for several years, and which is well deserved, for no bulbous plant will give more genuine satisfaction. If given plenty of sunlight, they will grow in almost any soil; although they like a generous amount of plant food, which is best provided by spading well-rotted manure into the ground. If the manure is not readily obtained, pulverized sheep manure from the seed store will give excellent results, and may be used, in any event, at intervals during the growing season, being worked into the soil along the rows. Poultry-manure gives good results if put into the bottom of a trench with a full inch of earth thrown over it before the bulbs are set in place. The bulbs should be set from three to five inches deep, according to size, and, when beds are made, it is a good plan to dig out the soil to the right depth and then spread an inch of sand on the bottom of the excavation, in which the bulbs are set. This insures uniform planting, and consequently uniform blooming.

Often a succession of flowers in the same bed is wanted. Then the first planting may be made with eight inches between the bulbs in the rows, and a second planting made two or three weeks later. Or early and late blooming bulbs may be planted at the same time. Very early flowers can be obtained by starting the bulbs in boxes indoors, but outdoor planting can be done as soon as the frost is out of the ground, as no harm will follow, even if the mercury drops to freezing or below before the stalks appear. With cultivation once a week and plenty of water, there is practically no uncertainty whatever about obtaining a great mass of bloom. In planting the Gladioli, however, the garden maker should remember that some varieties which make a brilliant show in the garden are almost worthless for cutting. When the right kinds are chosen, though, they are unsurpassed for cut-flowers, lasting a week or ten days.

Gladioli may be increased rapidly by means of the bulblets which form in the course of the summer, clustering around the parent bulbs. They should be care-

fully stored for winter and planted out in rows in the spring, where they can be cultivated like corn; but before they go into the ground they should be soaked for ten or twelve hours in tepid water, which will greatly increase the percentage of germination. In a few years any one can have a large number of bulbs, but it is well worth while investing in some of the newer sorts each season. And, in this connection, it may be said that it pays to get one's order in early, for the big growers are fairly swamped with business as soon as the season is well under way. It is very interesting to have a corner in the garden where several new varieties may be tried out each year. With the information obtained in this way, it is easier to make up satisfactory color combinations in the beds and borders. *Gypsophila* (baby's breath) or sweet alyssum may be used to cover the ground under the blossoms in the beds, and thus enhance the effect. Anyone who has a greenhouse can have Gladioli in blossom by April or May; for some varieties force with the greatest ease in a temperature of 55° or 60°.

The Late Season.

In the Eastern and Northeastern part of the United States this year the season is an exceptionally backward one and growers of Gladioli have been very much behind in getting their stocks into the ground. As the weather has been cool there has been no particular difficulty about holding the stock dormant, and, therefore, it is probable that the first bloom from field grown stocks will be late this year. The dates set for the flower shows in August may be too early if the season continues cool, but plenty late enough if warm and moist weather should be experienced from now on. Gladiolus growing has all of the difficulties of any other horticultural pursuit and not the least of which is the experiencing of difficult and disagreeable weather during the planting and harvesting season. A late planting season does not necessarily mean a late harvesting season, but growers this year must look forward to the possibility of a short growing season and perhaps an immature crop as the result. However, the law of averages usually brings about so much warm weather during the season. Records tell us of the year 1816, known as "Eighteen hundred and froze to death," during which there was not a single month without killing frost, and it is to be hoped that we are not doomed to that sort of weather during this entire season.

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Vol. III.

June, 1916

No. 6

Desirability of Accuracy in Printed Statements.

In our "Wayside Ramblings Department" this month Mr. G. D. Black under heading of "An Explanation of Nomenclature" makes a remark that might serve as a text for considerable of a sermon on the responsibility of a writer or publisher. There is no doubt, as Mr. Black suggests, that printed matter should be correct, but we would call attention to the fact that the word "absolutely" should not be used in this connection. Absolute accuracy is almost a thing impossible, and certainly printed statements are practically never absolutely correct. However, it is not our desire to criticise Mr. Black's remark, but rather to point out the value of it, and to try to impress young writers, especially, with the idea that they should use extreme caution in their statements. Positive statements should generally be qualified unless of an extremely general character and the word "about" should be frequently interspersed among statements of fact. Very few things indeed are exact and we should explain our statements even at the risk of verbosity.

We agree with the suggestion Mr. Black has offered and suggest that it should be borne in mind by all who write

for publication. We have written many thousands of words in our special field of work (which is far removed from floriculture) and while we do not claim that our statements have always been exact and not subject to correction and criticism, yet we have always had in mind the idea that Mr. Black suggests and for this reason have found it necessary in but very few cases to acknowledge error in statements of fact which we have made.

MADISON COOPER.

"A Rose by Any Other Name."

Apropos of the pronunciation and mispronunciation of the words "Gladiolus" and "Gladioli," the following incident is related:

An amateur gardener who had acquired the newer pronunciation was heard to call to her neighbor over the back-yard fence: "Do you think it is too early for me to plant my Gla-d-i-o-li?" The neighbor looked somewhat puzzled but replied, "No, I planted my Glad-i-o-las this morning and I suppose those that you speak of are bulbs, too, aren't they?"

The old pronunciation which is the most commonly heard with the accent on the "o" is so much easier to pronounce and withal is so old-fashioned and common that the acquiring of the newer and

correct pronunciation with the accent on the "di" is a very slow process indeed and even some of those who have been familiar with our beautiful flower for many years do not distinguish readily between the singular and plural. We take this occasion to suggest that Gladiolus is the singular and Gladioli is the plural. If in doubt which to use, substitute the singular and plural of rose and it is very easy to determine.

The Truth About Gladiolus

Growing for Farmers.

My attention has been called to an article in the *Country Gentleman* on the growing of Gladiolus bulbs and blooms as a crop for farmers. Some remarkable statements about profits are made. What is the truth about it? E. F. G.

The many well-known and some of the newest varieties of Gladioli are beautiful and valuable to grow in the home garden, and the cultivation of them should be encouraged for several reasons. They are easy to grow, and bulbs of such varieties as *America*, *Mrs. Francis King*, and many others are very moderately priced. The flowers are delicate yet showy, and when cut keep a long time in water. In the article referred to by E. F. G., the farmer is urged to plant them commercially, and a gross profit of \$4,000 per acre promised on *Panama*. The farmer is advised to plant fourth size bulbs, which are said to produce good to high grade flowers, and additional bulbs.

A Gladiolus bulb of one-half to three-quarters inch would not be bought by any florist to use for cut flower purposes, as it will produce a small flower that would be practically unsalable on the wholesale markets, which is proven by the tens of thousands that were thrown out on the New York market the past two seasons. The finest *America* and *Mrs. Francis King* often did not bring \$1 per 100 in New York the past season, and these flowers were grown from bulbs averaging $1\frac{1}{2}$ to $2\frac{1}{2}$ inches in diameter. The small half-inch bulb is used for growing a larger sized bulb for flowering purposes the following season.

If you buy 1000 large, or small, half-inch bulbs they will each produce one bulb for the next season's use and a number of small corms which require four years' growth to reach the large flowering size. The bulbs should be planted early in the Spring, and in order to grow a good strong bulb from the half-inch size, the flower should either be left

on the plant or be cut without a stem, as all the leaves should be left on the bulb to mature it properly. Thorough cultivation must be given to the end of the growing season. Figure just about how much you think it will cost you to weed and cultivate a lot of Gladioli, from early Spring to the first frost. I feel sure you will find it cheaper to buy bulbs than to try to grow them.

I have purchased this Winter for forcing largest size *America* and *Mrs. Francis King* at \$5 per 1,000 from a grower who planted 30,000 the past season and did not make expenses. A neighbor florist who has been growing 50,000 each season has sold a large proportion of his stock for the same reason. He intends growing some of the newer varieties for a few seasons, such as *Panama*, *Peace*, *Augusta*, and several others. Salesmen from Holland have been offering large lots of *America*, small size, as low as \$1.50 per 1000.

Any farmer before going into this business should arrange for an outlet for his flowers, as I know of instances where such growers have gone to large commission houses, to find them so overloaded by regular, all-the-year consignors that they said they could not possibly handle any more stock. I was told of a young woman who went to a large Philadelphia commission house and begged them to sell Gladioli for her. When told they could not possibly handle any, she began crying, and mentioned a number of other sources of outlet she had tried to no avail, and stated she read in some paper what a fortune there was in the business. It is indeed unfortunate that horticultural papers should allow such articles in their columns without investigation. The paper that protects its subscribers against such visionary schemes for money-making, as does *The R. N.-Y.* is of inestimable value and deserves a boost by every reader.—ELMER J. WEAVER in *Rural New Yorker*.

Note by the Editor—We especially commend for careful consideration the commonsense reply of Mr. Weaver to the inquiry of "E. F. G." as it appeared in *The Rural New Yorker*. Those who write for publication are too much inclined to write for effect and the article referred to has already been criticised and commented on in these columns. As a caution, it might be suggested that those who write for publication should as a cardinal principle hold themselves strictly to facts and not only this, but state things so that they may be understood as they should be and not make statements which are misleading, even though based on absolute fact.

WAYSIDE RAMBLINGS.

BREEDING FOR NOVELTIES.

Recent papers in this magazine made recommendation, first, that Gladiolus seed be sown too thickly in order to destroy the weaklings at the start, and, second, that strikingly aberrant forms be avoided and only normal forms of moderate characteristics be used in crossing.

That is exactly right if a good high average commercial product is desired, but exactly wrong if the object is rapid improvement of a specific kind. Extreme variations when they first appear are very apt to be accompanied by weakness and a faulty constitution, but these can be bred out by proper crossing, and the unique quality, otherwise unattainable, superposed on a robust and vigorous habit.

Experts in heredity estimate that each parent transmits about one-seventh of its own peculiar qualities to its offspring; for example, if two whites, each the offspring of colored sorts, were mated, about two-sevenths of the seedlings would show a decided tendency to whiteness. Mating these whites together should produce whiteness in a little over half the grandchildren, and so with other qualities. Nearly all our finest kinds have a long line of robust ancestors, and so reversion to robustness comes easily by crossing with a robust mate. Often it is the weaklings that show the highest development of some desired character, and this character is precious, because it can be fixed upon a robust constitution by repeated crossing.

For example, suppose we wish to produce a pure white, with flowers six inches across, of great substance, and borne on stems six feet high. Mating average normal "near-whites" would never get it, but if we mate the purest white—say a weak sort like *Europa*—with the tallest and most robust near-white, like *Peace* or *Augusta*, and the resulting tallest and most robust near-whites back to *Europa*, and, if necessary, repeat the operation, if we use enough material, we will certainly get seedlings as white as *Europa* and with the vigor of the others; and proper selection and intercrossing of these would in the end give what we want. Following this plan for only two generations has given me a strain coming mostly white with some as white as *Europa* and about 4½ inches across the flower, on strong stems, and some nearly white, large-flowered, and six feet high, and, of course, the work is only begun.

If a breeder gets a seedling with some unique and desirable character, but otherwise worthless, it is merely a matter of time and patient and judicious crossing to impose that character upon a robust and satisfactory variety, but he must make up his mind as to what he wishes to accomplish, keep track of his pedigrees, (approximately, at least,) and be willing to persevere through several generations in order to attain his ideal.

THEODORE L. MEAD.

AN EXPLANATION OF NOMENCLATURE.

I am becoming more reluctant in writing anything for publication because I realize by experience that it is very important that printed matter should be absolutely correct, and even then it is sometimes misunderstood. It has been my practice when describing varieties to place in parenthesis the other names by which they had been known. I will discontinue this as it only adds to the confusion of names. When I intended to convey the idea that *Baron Hulot* had been catalogued and known by many as *Blue Jay*, some naturally thought that I meant that they were both one identical variety.

I first saw *White King* when at the Chicago convention, and was informed by a good authority on Gladiolus nomenclature, that the originator had first called it *White Glory* and afterwards changed the name to *White King* to avoid confusing it with *Glory*.

This was in my mind when describing *White King*, and I did not know until later that another variety had been named *White Glory*. I make this explanation as I realize that through ignorance I may have done harm to the originator.

G. D. BLACK.

FALL PLANTING OF GLADIOLI.

Is there any marked difference in the hardness of Gladiolus bulbs, according to variety? Every spring when I dig up my garden I turn out occasional bulbs that have wintered in the ground, and some others that I do not turn out, come up here and there, grow and bloom. The lateness of this season, and unusual amount of rainfall, will prevent getting my bulbs in the ground until almost a month later than usual, and lead me to wonder if they could not be planted in the autumn, like tulips, if bedded in sand and furnished a little extra protection. I should be pleased to have the experience of any one who

has tried the experiment in the latitude of southern Ohio. A. C. THOMAS.

Note by the Editor :

One fall we planted several hundred Gladiolus corms rather deeply in cold frames, putting in the corms about November 1st. It was our hope that these corms would root during the winter and that we would get earlier bloom in the spring, but the result was unsatisfactory and much of the stock came "blind," as the florists say. That which did bloom was not much, if any, ahead of early spring planted. Would be glad to hear from others who have had experience along this line.

a fair price at least for a limited number of flowers. Such standbys as *America*, *Mr. Francis King*, *Augusta*, and *Pink Beauty* when the bulbs can be bought reasonably are a good investment and help to bring in a few dollars when things are rather quiet. Even if only for keeping your show window or store in good shape a good stock of Gladioli are well to have. Don't overlook the fact that in order to have a succession of flowers you must plant four to six different times; put in bulbs every ten days or so. The first ones planted outdoors are just pushing their way through the soil; that means to plant more and keep it up until the middle of June. Plant enough, and *America* should



A field of Gladioli in Holland—Establishment of K. Velthuys, Hillegom.
The variety shown is *Glory of Holland*.

Gladioli for Cut Flowers.

For an inexpensive cut flower during the coming Summer months you can't do any better than plant Gladioli. Conditions in Europe have affected the Gladiolus market to such an extent that fair sized bulbs can be had for less money than was ever possible before, and the retail grower should take advantage of it. No one will ever get rich on Gladiolus flowers during August and September. In the larger cities they are a glut on the market during that time, and often can't be disposed of at any price. In the smaller towns, however, this is not so noticeable and the retail grower, if not growing on too many, usually has no trouble to obtain

be the leading sort; its soft pink color makes this one of the most useful of a varieties to the florist, and when you plant or rather order your requirements of bulbs don't forget some of the new ones. Give them a trial, it's well worth your while to do so.—*Florists' Exchange*

The first old subscriber to take advantage of our offer to extend subscription at the present rate sent us a check for \$3.00, which paid for nine years in advance. The offer is good until July 1st and old subscribers can pay as far advance as they wish at the present rate of three years for \$1.00. July 1st the subscription rate will be advanced three years for \$1.75 or 75c. per year.

American Gladiolus Society.

Preliminary Schedule of the Seventh Annual Exhibition of The American Gladiolus Society to be Held Under the Auspices of The Massachusetts Horticultural Society at Horticultural Hall, Boston, Mass., August 11, 12 and 13, 1916.

Copies of this schedule may be had by addressing
H. Youell, Secretary, 538 Cedar St., Syracuse, N.Y.

THE members of the American Gladiolus Society are to be congratulated that our Show next August will be held in Boston under the auspices of the Massachusetts Horticultural Society, in their beautiful and spacious hall. It is desired that all growers of our beautiful flower, amateur and professional alike, take part in the Exhibition.

RULES.

No. 1. All entries must be made to the Secretary not later than five days before the first day of the exhibition, on blanks provided by the Secretary for the purpose.

No. 2. Exhibits in competition for prizes must be of the exhibitor's raising.

No. 3. All exhibits must be in place by 12 o'clock noon the first day of the Show, at which time the judging will commence.

No. 4. Exhibitors are required to keep their flowers in fresh condition during the time the exhibition remains open.

No. 5. Exhibitors will be awarded but one premium in each class in which they compete and then only where the exhibits on their merits warrant the judges in making awards.

No. 6. While the Society will take care of the property of exhibitors, yet it will not in any way be responsible for the loss of or damage to anything exhibited.

No. 7. Exhibits after being staged cannot be removed until the exhibition is closed, without the consent of the Exhibition Committee.

No. 8. The Society requests exhibitors to attach labels to exhibits. Correct naming of varieties is very important.

No. 9. Vases and tables will be provided for all competitors.

No. 10. Seedlings to be passed upon by the judges must be entered on the blanks, stating the number of vases.

NOTICE.

Those who cannot attend the Show with their flowers are cordially invited to

send them by Express prepaid, with entry cards attached, and they will be properly staged. Due notice should be given to the Secretary.

A cordial invitation is extended to commercial growers to trade exhibits; every facility will be afforded them.

SCHEDULE OF PRIZES.

OPEN CLASS.

The Massachusetts Horticultural Society

	1st.	2nd
No. 1—	\$10	\$5—Vase of 25 spikes, White, one variety.
No. 2—	10	5—Vase of 25 spikes, Red, one variety.
No. 3—	10	5—Vase of 25 spikes, Crimson, one variety.
No. 4—	10	5—Vase of 25 spikes, Pink, one variety.
No. 5—	10	5—Vase of 25 spikes, Yellow, one variety.
No. 6—	10	5—Vase of 25 spikes, any other color, one variety.
No. 7—	10	5—Vase of 25 spikes, any Lemoinei Hybrids.
No. 8—	10	5—Vase of 25 spikes, any Primulinus Hybrids.
No. 9—	50	25—Largest and best collection of named varieties, one spike of each.
No. 10—	20	10—Collection of 50 named varieties, one spike of each.
No. 11—	4	2—Vase of 6 spikes, White, one variety.
No. 12—	4	2—Vase of 6 spikes, Red, one variety.
No. 13—	4	2—Vase of 6 spikes, Crimson, one variety.
No. 14—	4	2—Vase of 6 spikes, Pink, one variety.
No. 15—	4	2—Vase of 6 spikes, Yellow, one variety.
No. 16—	4	2—Vase of 6 spikes, any other color, one variety.
No. 17—	4	2—Vase of 6 spikes, any Lemoinei Hybrid.
No. 18—	4	2—Vase of 6 spikes, any Primulinus Hybrid.
No. 19—	2	1—Vase of 3 spikes, White, one variety.
No. 20—	2	1—Vase of 3 spikes, Red, one variety.
No. 21—	2	1—Vase of 3 spikes, Crimson, one variety.
No. 22—	2	1—Vase of 3 spikes, Yellow, one variety.
No. 23—	2	1—Vase of 3 spikes, any other color, one variety.

Note—Those competing in classes of 25, 6, and 3 spikes must have different varieties.

- | | | |
|-------------|-------|---|
| 1st | 2nd | |
| No. 24—\$ 6 | \$ 3— | Twelve vases, 12 named varieties, one spike each. |
| No. 25— 10 | 5— | Twenty-five spikes, artistically arranged, receptacle to be furnished by the exhibitor. |
| No. 26— 50 | 25— | For the most artistic display, covering not more than 300 sq. ft., any decorative material may be used. |

Charles F. Fairbanks, Boston, Mass.,—
Special Prizes.

- No. 27—Best seedling Gladiolus, one spike, 1st \$25; 2nd, \$10.

Jacob Thomann & Sons, Rochester, N. Y.

- No. 28—100 bulbs *Rochester White*, first; 50 bulbs *Rochester White*, second; best vase of white or light colored seedling, new.

W. Atlee Burpee & Co., Philadelphia, Pa.

- No. 29—\$10—Best collection 10 varieties, 6 spikes each.

G. D. Black, Independence, Iowa.

- No. 30—First, 25 bulbs *Hiawatha*; second, 25 bulbs *Scarlet Feather*. Best 12 spikes *Golden King*.

H. E. Meader, Dover, N. H.

- No. 31—Cut glass vase, value \$5, best new yellow *Primulinus* Hybrid seedling, purity of color and size to count.

Clark W. Brown, Ashland, Mass.

- No. 32—First, \$3; second, \$2; third, \$1. Best 3 spikes *Mongolian*.

Fottler, Fiske, Rawson Co., Boston, Mass.

- No. 33—First, \$7; second, \$5; third, \$3. Best 5 varieties, 3 spikes each.

A. E. Kunderd, Goshen, Ind.

- No. 34—First, Gold Medal; second, Silver Medal; third, Bronze Medal. Best collection Kunderd's varieties.

Hitchings & Co., Elizabeth, N. J.

- No. 35—A Silver Cup, value \$10—For the most artistically arranged basket or hamper of blooms—not more than 25 spikes.

A. H. Austin Co., Wayland, Ohio.

- No. 36—\$5 for best 6 spikes of mauve color. One variety. Purity of color and size of flowers to count.

- No. 37—25 bulbs *Herada* for best 6 spikes *Rose Wells*.

CLASS B.

AMATEURS WHO GROW OVER 1,000 BULBS.

H. E. Meader, Dover, N. H.

- No. 40—25 bulbs *Mrs. Frank Pendleton*, best 6 spikes new seedling originated by exhibitor.

Clark W. Brown, Ashland, Mass.

- No. 41—First, \$3; second, \$2; third, \$1. Best 6 spikes any Blue varieties.

A. E. Kunderd, Goshen, Ind.

- No. 42—First, Gold Medal; 2nd, Silver Medal; 3rd, Bronze Medal. For best exhibit Kunderd's *Primulinus* Hybrids, open only to those who have never exhibited before the A. G. S.

B. Hammond Tracy, Cedar Acres, Wenham, Mass.

- No. 43—Silver Cup. Best 25 spikes *Dawn* (Tracy).

Massachusetts Horticultural Society.

- No. 44—First, \$5; second, \$3. One vase, ten spikes one variety.

Munsell & Harvey, Ashtabula, Ohio.

- No. 45—25 bulbs *Hazel Harvey* for 6 spikes best Red variety.

Willis E. Fryer, Mantorville, Minn.

- No. 46—First, 25 bulbs; second, 12 bulbs, of *Mrs. W. E. Fryer*, for 6 best spikes of that variety.

Vaughan's Seed Store, Chicago and New York.

- No. 47—Silver Medal for best 12 spikes each of the following varieties: *Mrs. W. S. Brewster*, *Margaret* and *Primulinus Sunbeam*.

A. H. Austin Co., Wayland, O.

- No. 48—25 bulbs *Gretchen Zang* for best 6 spikes *Wamba*.

CLASS C.

AMATEURS WHO GROW LESS THAN
1,000 BULBS.

Jacob Thomann & Sons, Rochester, N. Y.

- No. 50—First, Bulbs valued at \$5; second, bulbs valued at \$2.50—best vase of any White variety.

H. E. Meader, Dover, N. H.

- No. 51—12 bulbs *Mrs. Frank Pendleton*—best 3 spikes new seedling originated by exhibitor.

Clark W. Brown, Ashland, Mass.

- No. 52—First, \$3; second, \$2; third, \$1—best 6 spikes of any one or more varieties.

A. E. Kunderd, Goshen, Ind.

- No. 53—First, 50 bulbs; second, 25 bulbs; third, 12 bulbs Kunderd's new *Primulinus* Hybrids for best collection Kunderd's *Primulinus* Hybrids; open only to those who have never exhibited before the A. G. S.

Munsell & Harvey, Ashtabula, Ohio.

- No. 54—25 bulbs *Hazel Harvey*, for best 6 spikes of Red variety.

M. F. Wright, Fort Wayne, Ind.

- No. 55—\$5 for best 6 spikes *Rose Bud*.

Arthur Cowee, Berlin, N. Y.

- No. 56—\$5 for best vase 12 spikes *Peace* (Groff's).
No. 57—\$5 for best vase 6 spikes *Dawn* (Groff's).
No. 58—\$10 for best vase 6 spikes *Afterglow* (Groff's).
No. 59—\$5 for best vase 6 spikes *Berkshire*.

Carter's Tested Seeds, 102 Chamber of Commerce Bldg., Boston, Mass.

- No. 60—First, \$8; second, \$3—best 10 named varieties, 1 spike each.

Sunnyside Gladiolus Gardens, Natick, Mass.

- No. 61—First, \$5; second, \$3; third, \$2—best 6 spikes *Mrs. F. Pendleton*.

Raymond W. Swett, Saxonville, Mass.

No. 62—Bulbs valued at first, \$4; second, \$3; third, \$2; fourth, \$1—for best collection of named varieties, bulbs to be selected from donor's catalog.

T. A. Havemeyer, New York.

No. 63—Best 3 spikes any Red variety, \$3, first; \$2, second.

No. 64—Best 3 spikes any White variety, \$3, first; \$2, second.

No. 65—Best 3 spikes any Pink variety, \$3, first; \$2, second.

No. 66—Best 3 spikes any Yellow variety, \$3, first; \$2, second.

No. 67—Best 3 spikes any Blue variety, \$3, first; \$2, second.

No. 68—Best 3 spikes any other color, \$3, first; \$2, second. Raised by exhibitor.

No. 69—Best seedling, one spike, \$10, first; \$5, second.

Breck-Robinson Nursery Company.

No. 70—For best Pure White, 3 spikes; first prize, 15 bulbs *Monadnock*; second prize, 10 bulbs *Monadnock*; third prize, 5 bulbs *Monadnock*.

No. 71—For best White marked with pink or red, 3 spikes; first prize, 15 bulbs *Shasta*; second prize, 10 bulbs *Shasta*; third prize, 5 bulbs *Shasta*.

No. 72—For best Pink, 3 spikes; first prize, 15 bulbs *Spring Song*; second prize, 10 bulbs *Spring Song*; third prize, 5 bulbs *Spring Song*.

No. 73—For best Light Red, 3 spikes; first prize, 15 bulbs *Navajo*; second prize, 10 bulbs *Navajo*; third prize, 5 bulbs *Navajo*. (For best Dark Red, see No. 81.)

No. 74—For best Scarlet 3 spikes; first prize, 15 bulbs *Comanche*; second prize, 10 bulbs *Comanche*; third prize, 5 bulbs *Comanche*.

No. 75—For best Vermillion, 3 spikes; first prize, 15 bulbs *Apache*; second prize, 10 bulbs *Apache*; third prize, 5 bulbs *Apache*.

No. 76—For best Cherry-red, 3 spikes; first prize, 15 bulbs *Mohawk*; second prize, 10 bulbs *Mohawk*; third prize, 5 bulbs *Mohawk*.

No. 77—For best Yellow, 3 spikes; first prize, 15 bulbs *Lady Janet*; second prize, 10 bulbs *Lady Janet*; third prize, 5 bulbs *Lady Janet*.

No. 78—For best Lilac or Violet, 3 spikes; first prize, 15 bulbs *Ida Van*; second prize, 10 bulbs *Ida Van*; third prize, 5 bulbs *Ida Van*.

No. 79—For best Blue-lavender, 3 spikes; first prize, 15 bulbs *Independence*; second prize, 10 bulbs *Independence*; third prize, 5 bulbs *Independence*.

No. 80—For best Pink-lavender, 3 spikes; first prize, 15 bulbs *Pawnee*; second prize, 10 bulbs *Pawnee*; third prize, 5 bulbs *Pawnee*.

No. 81—For best dark Red, 3 spikes; first prize, 15 bulbs *Shawnee*; second prize, 10 bulbs *Shawnee*; third prize, 5 bulbs *Shawnee*.

No. 82—For best collection, 5 varieties, 3 spikes each; first prize, 15 bulbs *Clarice*; second prize, 10 bulbs *Clarice*; third prize, 5 bulbs *Clarice*.

T. A. Havemeyer, New York.

For ladies only.

No. 83—Basket of flowers, not more than 25 spikes, grown and arranged by exhibitor; \$10 first; \$5 second.

No. 84—Center piece, not more than 18 spikes, grown and arranged by exhibitor (any foliage may be used); \$10 first; \$5 second.

THE MODERN GLADIOLUS GROWER, Cal-
cium, N.Y.

No. 85—First prize, Silver Trophy Cup valued at \$20; second prize, a life subscription to

THE MODERN GLADIOLUS GROWER; third prize, a five year subscription to THE MODERN GLADIOLUS GROWER; fourth prize, a three year subscription to THE MODERN GLADIOLUS GROWER—for the best 6 spikes of Gladiolus bloom, any color or colors. No preference given to named varieties.

Joe Coleman, Lexington, Ohio.

No. 86—Silver Cup for best 3 spikes of seedling never before shown.

Note—A. E. Kunderd's offer in Class A, No. 34, as printed in the Preliminary Schedule sent out by the society states that it is open only to those who have never exhibited before the American Gladiolus Society. This is an error and the offer as printed in the foregoing schedule is correct as given us by Secretary Youell.

We would also call attention to the additional offers by A. H. Austin Co., No. 36, 37 and 48.

Packing Cut Flowers.

Flowers to be packed for shipping should be gathered so they can stand in water in a cool, dark place for about 24 hours. When ready to ship, line a box with newspaper and then with oiled paper—a thickness of each. Wrap a small roll of excelsior in tissue paper, and place in the box as a pillow for the heads of the blossoms. Take a strip of oiled paper wide enough to wrap the blossoms, and slit it to permit the stem to go through. Then twist the paper about the bloom, and place on the cushion. When this pillow is full, arrange a similar pillow in the other end. Pack from each end of the box. When the box is full, either put a cleat across the center of the stems, or tie them in place with a strong tape run through the bottom of the box, or pasted in it previous to packing. A strip of tape may be sewed to the bottom of the box if desired.

Cover the blossoms with oiled paper, put on the lid, and tie. If possible, put this box in another box, or wrap a sheet of cardboard about it before parceling for the mail. Mark plainly the address to which the box is to be sent, and that of the sender.—Wallace's Farmer.

Note by the Editor—

It is not considered necessary to allow such flowers as Gladioli which have large and porous stems to remain in the water as long as twenty-four hours. Four to six hours is ample and the shorter time the better providing the flowers take up all the water they will hold.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Gladiolus Corms Sprouting.

TO THE EDITOR:—

I have some Gladiolus corms which I find are sprouting. Is there any way to save them? It will be six weeks or more before they can be planted out.

T. L. W.

Answer:—Suitable temperature and humidity will retard the growth of Gladiolus corms so that premature sprouting does not ordinarily bother. Conversely, premature sprouting is caused by too high a temperature and too high a humidity. Spread out thinly to the air and dry off the roots or sprouts that have formed and keep them in this condition if possible till planted. Your corms which have already sprouted will be weakened in their vitality to some extent and although they will make a second sprout if the first sprout is broken off, yet any growth from the corm weakens it that much. Perhaps you refer not to the sprouts, but to the roots. Root growth will start quickly on some varieties and does no serious damage providing it is properly dried off and stopped although, as before stated, any growth takes some of the strength from the corm. Gladiolus corms should be stored in thin layers with a free circulation of air through them. This will ordinarily prevent too early a starting in the spring providing the temperature and humidity of the storage room is not too high. Some varieties, however, especially the early varieties, are inclined to start growth before planting time and such varieties should be stored with special care and not in large bulk. The storing of the early varieties on a wire screen supported so that the air can circulate through it makes the best arrangement.

Removing Roots and Old Corm with Knife.

TO THE EDITOR:—

I am mailing you under separate cover a couple of bulbs of *Halley* which are typical of a lot just received from Holland, showing that the shrewd Dutchman may have discovered a way to lighten his labor in taking care of his huge crop. These

bulbs bear abundant evidence that a knife has been used to separate the old corms from the new. If it has been found that the root and old corm can as well be cut off in the field at the same time the top is cut, the discovery will certainly save the grower a lot of time and labor. The question is, is it good practice? We are taught by the authorities to wait until the bulbs are somewhat dried out, when the old corm can be easily removed with the thumb, which becomes a somewhat tedious job when many are to be cleaned, yet this method results in more attractive appearing bulbs. My object in sending you these bulbs is to ascertain if you know anything of the practice of cutting such as these indicate. It may be merely the invention of a shiftless laborer, and not common practice, yet from the fact that nearly all the lots I received, comprising different sizes and varieties, bore unmistakable evidence of the same treatment, I am lead to believe that possibly it is becoming to be the customary way. Bulbs received last year from the same firm bore no such evidence of having been separated by the knife.

H. G. R.

Answer:—While it is possible that we may have seen corms from which the old corm had been removed with a knife, yet it has never attracted our attention particularly and we would be glad to hear from those of our readers who have seen anything of this kind in their experience. It is probable that this practice is resorted to, as suggested by "H. G. R.," at digging time, and that the top and the root and old corm are removed at the same time. This would save rehandling and might be an economy, but as cutting off the old corm and roots with a knife leaves the new corm in an unsightly condition it may be questionable practice as a part of the roots and a part of the old corm still adhere to the samples sent. It is also suggested that if the old corm was diseased that planting a portion of it with the new corm might result in the new corm being affected. We would be glad to hear from other growers on this subject.

Price of Cut Gladioli.

TO THE EDITOR:—

What is the average price that is likely to be obtained from Gladiolus cut blooms the coming summer? I want to get back part of the cost of something like one thousand bulbs that I have planted and don't know just how to do it.

W. J. D.

Answer:—It is hard to state what the

average price will be. Gladiolus blooms have been sold at wholesale below \$1.00 per hundred and even as low as 50c. per hundred, but the retail price is hardly ever below 25c. per dozen and usually from 40 to 75c. per dozen. There are times when the cut flower market is badly glutted with Gladioli. This occurs especially in the month of August when the greatest bloom opens and a warm rainy spell may bring on a flood of bloom which cannot possibly find a market. If you sell at retail you should be able to get from 25c. to 50c. per dozen in country places or small cities and perhaps higher for the earliest bloom during a part of the month of July.

New Gladioli.

Every season we have a lot of fun trying out new varieties of Gladioli. With the exception of Dahlias no flower has more enthusiasts and, personally, I prefer it over all others. They grow so easily and are so strikingly beautiful and as a cut flower last so long.

To grow them to perfection they should be given plenty of room and lots of sunlight; in fact the kitchen garden is the place for them. I never advocate them for a bedding plant or to be planted with other flowers in the front yard. Nothing pains my sense of propriety more than to see a little front door yard stuffed full of Dahlias, Gladioli, Sunflowers and Zinnias. No! plant them in the kitchen garden where you can give them plenty of rich soil and cultivate with the horse. Then you will get the blossoms in profusion of the finest quality and largest size. I have grown *Mrs. Francis King* 5½ inches in diameter and as beautiful as any *Amaryllis*.

Of course it is supposed that all of my readers are now growing the more common and standard sorts such as *America*, *Mrs. Francis King*, *Augusta*, *Princeps*, *Hulot*, *Taconic* and *Golden Queen*. But many of you as yet have not grown some of the following, that I think have come to stay: *Niagara*, this grand flower out classes all recent introductions, in our estimation. Tall, strong spikes of creamy pink blooms.

Harvard or *George Paul*: Rich velvety maroon, slightly flushed dark scarlet. The market demand for this sort has never been filled. In a class by itself.

Halley: A rank grower and very early bloomer of beautiful flesh pink blossoms. You always like to gather them.

Europa: The greatest white Gladiolus we have ever seen. Waxy petals of good

substance and flowers of fine shape and good size.

Willie Wigman: Exceptionally large flowers. Pearly white with brilliant ruby throat.

Ophir: Golden cream. Flushed pink with flamey crimson blotches on petals.

Lily Lehmann: Here we have the most exquisite and entrancing thing in a Gladiolus that I have ever seen. Reminds one of the inside of a pearly pink sea shell. Not quite as strong a plant as I would like but otherwise a gem.—W. J. MOYLE in *Wisconsin Horticulture*.

Statement of the Ownership, Management, Circulation, etc., required by the Act of Congress of August 24, 1912, of THE MODERN GLADIOLUS GROWER published monthly at Calcium, N. Y., for April 1, 1916.

STATE OF NEW YORK }
COUNTY OF JEFFERSON } ss:

Before me, a Notary Public in and for the State and County aforesaid, personally appeared Madison Cooper, who, having been duly sworn according to law, deposes and says that he is the Owner of THE MODERN GLADIOLUS GROWER and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher—Madison Cooper, Calcium, N. Y.
Editor—Madison Cooper, Calcium, N. Y.,
Managing Editor—Madison Cooper, Calcium, N. Y.,
Business Manager—Madison Cooper, Calcium, N. Y.

2. That the owner is Madison Cooper, Calcium, N. Y.

3. That the known bondholders, mortgagees and other security holders owning or holding 1 per cent. or more of total amount of bonds, mortgages, or other securities are:

None.
4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

(Signed) MADISON COOPER.

Sworn to and subscribed before me this 25th day of March, 1916.

[Seal.] (Signed) C. HOWARD GREEN.

(My commission expires April 1, 1916.)

Spanish Iris.

First in value among the things recently introduced as commercial cut flowers we can consistently class the Spanish iris. Evidently its career for this purpose has but just begun and there can be no question as to its much larger use in the immediate future. For table centre vase purposes it is really without a superior in its way as those who saw it used with such exquisite effect at the New York Show can testify. Add to its good qualities of pure colors and classic form that very essential trait of long-keeping as a cut flower and the Spanish iris certainly is "some class."—*Horticulture*.

While the eastern part of the country has suffered from cold weather and heavy and unnecessary rainfall, there are parts which complain of drought. It would seem, therefore, that the season so far as rainfall is concerned is a very mixed one. The great bulk of Gladioli are grown in the Eastern states and for the most part this section has experienced heavy rainfall and backward weather.

W. E. KIRCHHOFF CO., Pembroke, N. Y., growers of the finest Gladioli, such as Pendleton, Panama, Niagara, Pink Perfection, Europa, Mrs. Fryer, War, Peace, etc. Correspondence solicited.

If you are a professional, commercial, or amateur grower, you will find the columns of

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M. F. WRIGHT Gladiolus Grower



1906 SMITH ST.
FORT WAYNE, IND.

We have already suggested that growing Gladioli from seed is an interesting feature of the growing of the Gladiolus. Don't expect too much from your seedlings and don't try to name any of them unless you are pretty well posted on the common sorts. Much unnecessary loss of effort has resulted from inexperienced growers putting on the market ordinary seedlings.

Sunnyside Gladiolus Gardens

L. Merton Gage, Proprietor

Natick, Massachusetts

Gladioli Exclusively

Most People Know that I grow and sell the Best Gladioli

and that my prices are low. Besides the well known good sorts I keep up with the times and have the new sorts

Pink Perfection
Goliath, Schwaben, Mrs.
G. W. Moulton, Mrs.
Fryer, &c.

Trial box of 50 selected flowering
size for 50 cents.

Geo. S. Woodruff
Independence - - Iowa

THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.
Published Monthly by Madison Cooper, Calcium, New York.

Vol. III.

JULY, 1916

No. 7



GLADIOLUS—HELEN SILL.

This variety was raised from seed purchased by Matthew Crawford, Cuyahoga Falls, Ohio, from Kelway & Sons, of England. In color it is a lavender pink and the bloom is of good size and is a great favorite as a cut flower.

The Gladiolus Manual.

By W. W. WILMORE, JR.

CHAPTER XIV.

Growing Gladioli for Cut Flowers.

THE Gladiolus has become intensely popular as a cut flower and thousands are sold daily both winter and summer for this purpose. It is used in all lines of floral work. For decorating halls, churches and other public buildings it has no equal, the array of color produced from one dozen spikes of Gladioli cannot be obtained from a similar number of any other flower. While it is somewhat stiff in appearance, with proper arrangement it becomes singularly graceful.

It is used in floral sprays perhaps more than any other way by floral designers, but some of the prettiest set pieces and designs the writer has had the pleasure of seeing were made partially at least of this flower.

It has a field of color that cannot be rivaled. The different forms and varieties of the Gladiolus give us an advantage over most commercial plants used for cut flower work. Its keeping qualities are not to be compared and the price at which it is produced makes it a floral commodity that cannot be dispensed with.

It might be well to mention, however, that all Gladioli are not suitable for cut flowers on account of their colors. Light shades and bright colors are in demand but dark and mottled colors are seldom marketable. The best colors are pink, white and red with their respective shades.

In dainty work the individual flowers can be picked off and used, often taking the place of orchids and at the same time giving the same appearance; this also is an advantage over most flowers.

The spike should always be cut as the first flower expands and allowed to open in water. By this method the flowers are not bruised in handling and will consequently last longer. The spike should have a small portion removed each day to enable better suction of water. The water should also be changed each morning and the dead flowers removed. While these little things may seem unnecessary it will be found that the life of the flower will be lengthened.

Spikes should be cut in the evening or early morning and not during the heat of the day when in a wilted condition. They

should always be allowed to harden in water before being used.

When growing Gladioli for the cut flower market one should select varieties that are always in demand and plant them at intervals from early April until June. In this manner a succession of bloom can be obtained that will last during the entire season. For extra early blooms, it is advisable to plant in cold frames. This can be done late in February or early March, provided one has prepared for planting by keeping the frost out during the winter.

The writer has had success with this early planting and has even planted in the Fall. By keeping the frost out, a few days is gained over early spring planting. Four by six feet sash are used, covered with rush mats and straw. They are opened in the spring as soon as the weather will permit, being careful not to chill the tender sprouts as they appear. From 200 to 250 corms are placed in each section which is that space covered by one sash.

A well grown spike should wholesale at three to five cents although there are times when prices are not profitable. Novelties sometimes bring as much as ten cents. It is the opinion of nearly all retail florists that a Gladiolus spike is a Gladiolus spike regardless of whether it is a novelty or of standard strains. They do not consider that the cost of a single corm in some cases would equal the cost of a dozen or more of some good common variety. In this the grower is mostly at fault by not setting different prices on his different varieties. I have seen the cheapest of standard sorts sell at the same price with novelties. In this we do ourselves an injustice, and from a business standpoint are materially wrong for the reason that a good spike cannot be cut from the plant without doing some injury to the corm though it may be ever so slight.

Another point which should be given great thought is cutting prices when the market is flooded. I have never found that in so doing we have gained a thing. In fact I really believe we have lost the extra labor and stock we are able to dispose of. For instance, if a grower is able

to sell 1000 blooms today at 4c. and tomorrow the price is cut to 3c. he will necessarily have to sell 335 more blooms to make as much money as the day previous. If the market is cut to 2c. he will have to sell 1000 more than he did when the price was at 4c. Now in the handling of this extra stock and the extra time in selling he is still losing his time, provided he was able to dispose of the extra amount. It is almost certain that the consumption will not warrant the use of the extra increasing amounts. Therefore, I would say that after the market drops to a fair price no further cutting of prices should be done although the sales be slow.

Another way to ease the market is by shipping to places where stock can be used. Every grower should have an outlet for his surplus stock in order not to flood his local market. All growers do not grow for cut flowers. In fact none are willing to cut all that bloom, but most of us grow a certain amount for this purpose and figure on disposing of all. I will say, however, that there is always a demand for first class stock though the market be crowded.

[Continued next month. Chap. XV. "Forcing Gladioli."]

Dahlias are Easily Grown.

Some smart fellow has predicted that an edible Dahlia will yet be produced, and I have no doubt but that it will, in fact it would be a very useful addition to our list of edible tubers, inasmuch as the blossoms themselves are worth while for growing for their beauty alone. The Dahlia is a lover of fertility, humus and moisture, without these conditions it will thrive very poorly, if it grows at all. As an ornament for back yards and other unsightly places it has few equals.

The plants sprout from the tubers, which somewhat resemble sweet potatoes. There is a dwarf variety, and a standard or large variety, there are single blossomed and double blossomed varieties, and almost every color can be found among the different varieties and many are variegated, some blossoms drop their petals soon after opening, while others stay fresh and beautiful for several days, so altogether they have a wide enough variation to please the most exacting.

Their cultivation is not difficult. In starting one buys the tubers, these send up one or more shoots each. They may be planted in open ground as soon as danger of frost is over, or they may be started in boxes of rich dirt indoors and transplanted, taking up quite a "hunk" of dirt with them. They should be

planted where they may be watered freely. This is why they are adapted to back-door conditions where water from the wash stand may be thrown on them. A hole should be dug in the ground from six to twelve inches in diameter, according to the number of tubers wanted in one bed, and should be 12 to 15 inches deep. Some well rotted stable or chicken manure should be mixed with the dirt and thrown in the bottom of the hole that is to receive them. The hole should be only deep enough so the crown of the tubers will be two or three inches below the surface when leveled down, and the dirt filled in about them should also be quite fertile naturally or made so by the addition of well rotted manure.

Some protection should be given the tender shoots, for they grow up quite fast and are slender and a heavy wind-storm plays havoc amongst them. We have never found anything better than a circle of ordinary woven wire fencing about 24 inches in diameter and three to four feet high. A stake will hold this solid, and the shoots will grow upward and outward locking themselves in the woven wire support. They require frequent watering for best effects in both blossoms and foliage, though too much water may have a tendency to make the tubers decay.

When the frosts come and the blossoming season is over, they should have the tops cut off near the ground. Before freezing weather sets in they should be dug up, thoroughly dried, and placed in the cellar or any ordinary cool place where the air is dry and the temperature does not reach the freezing point. Any ordinary cellar is good, precaution, however, should be taken to see that the rats and mice do not molest them. Each variety or color should be marked so one will know where to plant them for the best effects.

The writer had Dahlias grow eight feet tall last season. However, this is the exception rather than the rule. No doubt the location and generous watering had much to do with this instance, ordinarily the standard varieties grow three to five feet and dwarfs one and one and one-half to two feet. The tubers multiply so that your supply steadily increases. We consider them the most easily grown, and the prettiest hardy flower that can be raised on the average farm.—OMAR R. ABRAHAM in *Farmer's Guide*.

Owing to low temperature, surplus rainfall and lack of sunshine, the blooming season for Gladioli will be late this year.

MRS. AUSTIN'S TALKS.

"LILY BILL" AND THE EVOLUTION OF THE
SWALE THROUGH THE MEADOW.

Whichever way we turn we have the pleasing sight of trees, giving our hilltop the appearance of being surrounded by a vast circle of woodland. The light greens of those in the open low land shade into the darker tints of the more distant wooded ledges. The Mahoning glides quietly through the valley and where was once "Newport Pond," the big wide-water of the old Pennsylvania and Ohio canal, the boys still "go fishin."



Much as we admire those valley trees there are a few we sometimes wish were cleared away for they form a tantalizing screen hiding from our view a spot of wonderful beauty. When the original owner of the place behind the trees, marshaled his clan from Wales and settled in the valley, a part of his homestead was waste land, a swale through the meadow, where cat-tails and sweet-flag grew in swampy profusion.

The family increased and became a good sized settlement of thrifty farmers, tilling the soil and raising stock, taking especial pride in the care of their horses, and when driving to the county-seat for trading or tax-paying the back end of the load had its little bunch of hay for the noon meal of the horses.

Among the descendants bearing the

clannish surname, there were many that were given the Christian name of William in honor of their ancestral leader familiarly known as "Uncle Billy," and to distinguish one from another when speaking of them it became the custom to give each William some special appellation, as "Billy Dan," Daniel being the name of his father. Another, "Billy Gosh," who was somewhat inclined to emphatic language, and "Bill Sally," in honor of his mother, and a number of others with equally appropriate nicknames.

But there was one William who was different from the others and for whom no name suggested itself. As a grandson of the Celtic leader, a part of his inheritance was the swale through the meadow,

near the river. When the German carp craze came and it became about as common for farmers to have a carp pond as it is now to have a Gladiolus garden, this William drained a corner of the swale and made a suitable pond for carp. It was three feet deep and made shallower to the edge as carp required depth for shelter and shallow water for feeding. At last there was a title for him, and he was immediately christened "Billy Carp," and yet it seemed strangely unsuitable.

Carp did not prove to be of the value expected and ere long William wished to dispose of his stock and found a buyer in a grower of water-lilies who desired them to clear his pond of frog-spittle and aquatic weeds, it being food for the carp. The owner of the lilies claimed to be the pioneer grower of cultivated water-lilies

in the United States. Was a winner of prizes at the World's Fair at Chicago and originator of choice seedlings, among which was *Tuberosa Richardsons* and others. At that time cultivated water lilies were not so well known, the season had been a poor one for sales and the grower offered to exchange lilies for the needed carp, a proposition that was especially pleasing to William, as Mrs. William had previously suggested that upon the removal of the carp that the pond be filled with lilies. Thus came the woman touch in the evolution of the swale. The change of fish to flowers was disturbing to mem-



bers of the clan and caused them to look upon William with distrust. In their opinion he should plow more acres and feed more horses, cows and pigs and not potter away his time with such worthless things as flowers, and in derision they renamed him "Posey Bill."

Soil from the fields washed in and settling in the deeper places leveled it to a depth of two feet, the required depth for lilies, and that first pond was the nucleus of one of the finest of aquatic gardens. The roots were of the best varieties known. William's interest increased. It became his hobby. He studied their requirements and planned more ponds. The swale through the meadow was on sloping ground and he made a chain of ponds, each on a different level. The highest one is fed by six strong springs and each

pond drains to the next below, and lastly into the river, a distance of four or five rods. The ponds sometimes become filled too deeply with soil washings and it is necessary to excavate by draining and taking out the weedy soil, haul it to the fields and replace with thoroughly rotted barn-yard manure.

Being located in a rather out-of-the-way place, some distance from the main market road, few people saw the lilies, but to the occasional caller it was a sight to be remembered, and he invariably returned, bringing interested friends with him. Orders for both blooms and roots began to come, and one day when William casually mentioned that he had better returns from only the cut blooms than from his herd of cows, the clan admitted that there might be something in it and their highest tribute was to bestow upon him the name of "Lily-Bill," and William in his quiet unassuming way only smiled.

There are now twenty-five ponds in the chain, twenty-three are devoted to the finest varieties of water lilies, among which are *James Brydon*, *William Falconer*, *Gloriosa*, and also choice seedlings of his own raising that are of merit, *Mohawk*, *Mahoning* and others.

Muskrats eat roots and sometimes burrow through the banks, turtles are also troublesome. The most common insect enemies are the green and black aphides which are troublesome late in the season, but lady-birds, mostly, the yellow, feed on them and hold them in check.

Many years ago a far seeing civil engineer prophecied that the valley would become a great railroad highway which has proven true as the trains of three railroad companies pass through daily. The electric is also here and one of the stops is near the lily farm.

The old canal station Newport is but a memory, and the present progressive village with its pretty churches is now called Wayland in remembrance of the Walesland home of their ancestors.

At his beautiful home "Lily Bill" will receive you with gentle dignity and take pleasure in showing you plantings of dahlias and paeonies as well as the lily ponds in the meadow.

Mrs. A. H. Austin.

The list of prizes for small amateurs at the coming Boston show of the American Gladiolus Society is a good one. Any careful grower planting less than one thousand corms has a good opportunity of winning prizes in the small amateur class. See prize list in the June issue.

The Gladiolus in Dakota.

A GOODLY number of years ago, we began setting out Gladioli for summer blooming. These at first we placed quite close to the house where they would have the shelter from the wind and storms as well as from the extreme sun-heats of mid-summer. Last year, however, we put out some five hundred and more Gladiolus bulbs—five hundred new “boughten” ones and the balance grown from previous plantings. The season proving a very wet one, the location selected was not altogether desirable and we found in digging in the fall that only four hundred bulbs were taken from the soil, still these four hundred were the largest Gladiolus bulbs we had ever handled. There had been little increase by divisions, but the size had all gone to the single bulb, and I believe another fall, with a reasonable season, if the bulbs are planted out, that they will doubtless double in number if not in size. The loss of numbers we attribute, first, perhaps, to too much moisture, as some were in a low place, and practically stood in water at various periods during the season, and perhaps partly to some weak bulbs, in getting so large a number the selection might not have been as careful, as it would have been in buying a lesser quantity. Neither the bulbs nor flowers were grown for commercial purposes.

The Gladiolus offers one of the best bulbs for summer growing here (Dakota). These bulbs were planted in the garden, in common garden soil, which was very rich and mellow, and well cared for. We planted them in rows for cultivation with a horse cultivator, and cultivation was kept up until the shoots were too tall to allow such means of keeping them clean. We must admit that later in the summer, in spite of our best efforts (which weren't very good) the weeds grew up in the rows considerably, but not to the extinction of the blooms by any means. They began blooming in August, possibly in late July, and kept blooming until cut down by the late frosts, and we had a pretty late fall last season. The high cold winds were worse on the tall stalks than the first light frosts proved to be. The colors were wonderful, a great many immense spikes of pale pink blooms seemed to be general favorites, and more than one bride received a sheaf of these dainty hued flowers. The variations in the pinks and reds were beyond words and beyond numbers (al-

most) some producing immense flowers, probably four to six inches across and large spikes, others producing much smaller flowers less widely open and more compactly set on the tall stems. Some had branching flower stalks as many as five stalks to a bulb. In this case the outer flower stalks were much smaller, with fewer and smaller flowers to the stalk. We had, also, some rich purple blossoms, a color not so common in Gladioli, although coming into quite general use now. We had planted some “blue” bulbs the previous season, but they had not come to bloom, nor much growth, but amongst the mixed collection bought we had a goodly number of these choice blue flowers. The flowers themselves were not as large as some of the others, but it is quite possible that another season will show larger blooms.

SOME DRAWBACKS.

One difficulty in growing Gladioli here is on account of the high winds—when we had but a few we tied them to stakes, but with so many, single staking did not seem feasible to one with limited time; and these were not staked at all and did well. We think we might improve on the last year's plan by putting more bulbs to a row, setting in diamond fashion, three or four to a row, giving a wider row with bulbs quite close together. This, we think, might eliminate the wind problem, as the stalks could be tied to support each other, or one stake could be used to tie several stalks to, or if bulbs were set in narrow rows, even a wire netting might be run between the rows and the stalks tied to this. Raffia makes as good a tie as anything, it is soft and practically unbreakable and does not wear out or off. If one had a small garden cultivator, which is run by hand or boy or girl power, the rows could be made closer together and the result of a more compact bloom be secured. However, as we hope to use the horse cultivator, we think of setting in the close row, as before stated—three or four bulbs to a row, diamond shaped to each other.

Full sunshine doesn't seem to hurt Gladioli; in fact, they seem to revel in the hot weather and it is during that part of the season they produce their largest and best blooms.

In using a smaller number of bulbs we

[Continued on page 98.]

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
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Vol. III.

July, 1916

No. 7

Gladiolus Price Variation.

The question of prices as explained by "C. M. S." in our Wayside Ramblings Department this month, is a rather delicate subject and we hate to say much about it. Generally speaking low prices mean inferior quality, but this does not necessarily follow. It often happens that a grower may have a rather large quantity of a certain variety and that he cuts the price to dispose of it quickly. A partial explanation of the variation in price is that some growers have quoted wholesale prices to retail purchasers, but this is a matter which cannot be controlled, and each individual grower is "A law unto himself" in this respect. Failure to know the true market value of a given variety is often responsible for a grower quoting prices lower than should be made.

This variation in prices for an article of apparently the same value is not possible of an exact explanation. The suggestions above are some of the things which may account for it. Variation in prices of Gladiolus corms which are necessarily of varying value according to freedom from disease and condition of vitality, can always be expected entirely independent of individual ideas and personal considerations.

While business requires that goods

should be bought as cheaply as possible and sold for as high a price as possible, yet those most experienced in business have found that a low price sometimes means nothing but trouble and dissatisfaction and a keen business man will consider quality first and price afterward. The business man who sells at a price which is lower than will pay a reasonable profit is a poor business man and will not survive. This question of price is subject to many variations and nothing positive can be stated about it except in general terms. We invite further comment on this subject from anyone interested.

MADISON COOPER.

"A Rose by Any Other Name."

Apropos of what we had to say on the subject of pronunciation on page 81 last month, Clark W. Brown has something to say in our Wayside Ramblings Department this month. Mr. Brown makes a rather formidable argument, but we believe that the arguments for accenting the syllable "di" are more weighty.

In this connection, we would explain that our printer made rather a botch of the accent marks on page 81 last month. This was because corrections made in press proof were made in the wrong word. If anyone is enough interested to refer to

the above page of the June issue, we would state that the first word of the second paragraph showing pronunciation should be Gla-dí-o-li and that the second word should be Glad-i-ó-las.

We stand firm for the accent on the "di" and arguments which we think are unanswerable have already been printed in past issues.

This month Mrs. Austin in her department tells how the superior vision of "Lily Bill" led to "the evolution of the swale through the meadow." This little story points an object lesson which is worth while to study. It has always been that the person with an imaginative turn of mind can see possibilities in common things that the person without imagination cannot see, and while it is true that the person with a vision for greater things, is perhaps "visionary," so-called, and sometimes comes to grief financially, yet many of these visionary people have made notable successes in their chosen lines, not only from a scientific or practical standpoint, but from a financial standpoint as well. Even though the material rewards of the possession of a superior imaginative faculty may be small or entirely lacking, yet the person who works along untried paths is developing a character and getting an experience in this life which will fit him for a greater work in a life to come.

Directions for removing tops from Gladiolus corms at digging time sometimes state that they should be cut off half an inch to an inch from the corm. We believe this is wrong for the reason that when the top is removed the remaining portion is a dead material of no value to the corm. Therefore, it is just as well to cut the tops closely to the corm within one-quarter of an inch. If there is any objection to this suggestion we would be glad to hear from experienced growers. Do not be afraid that cutting the stalk short is a damage to the corm. It is a distinct help as there is less surface for rapid evaporation which tends to shrivel the corm.

The Gladiolus in Dakota.

(Continued from page 96.)

have started them in sand in a box, transplanting them as soon as the weather permitted, as they should not be put out until it is beyond the frost period, and this in this locality often means late May or even early June. We believe, though, that we might almost venture a little earlier planting, but that would depend largely upon the seasonal prospect. The bulbs make a very rapid growth, we have had box-set bulb stalks four inches tall in less than a week, hence we cannot think that the box method is necessary as the growth is so rapid after once planting. One can make boxes by folding paper and pinning it in place, paper bag fashion, as to the bottom of the box folding; these bags can be put in a box and filled with sand or soil, and the bulbs put in them and transplanting be easily done by simply putting the bag in a hole prepared for it. If the soil is wet the paper soon rots and the roots are free to go where they will.

Strong bulbs should begin blooming in August and the blooming period covers quite a space of time.

We think Gladioli one of the easiest flowers to grow here, the blossoms are wonderful, and the cost not prohibitive. As a usual thing the bulbs increase from year to year, the new bulb forming on top of the old one. We believe, because of this, that the original bulbs should be planted from four to six inches in depth, to give some support to the flower stalk.

We have found that going over the dry bulbs and removing the old ones from the base of the new ones, and all old roots, that the new bulbs start sooner, as they have a free chance for starting their own roots without having to work their way through or around the obstructing old bulb.

After the blooming season is over and after the stalks are cut down by frost, it is well (unless real winter threatens and danger of the ground freezing) to leave the bulbs in the ground as long as convenient, until the stalks are well dried and the bulbs thoroughly ripened. The bulbs may then be taken up, spread out in the sun a few days to dry, then cut the tops off, put in paper bags and keep in a dry place. We hang our bags in the furnace room, where no mice or rats can get at them, and where no frost can touch them. It is a very rare thing to have the bulbs rot, or mold. They are as a usual thing easy keepers.—ROSE SEELYE-MILLER in *Dakota Farmer*.

WAYSIDE RAMBLINGS.

TIME TO SECURE BLOOM FROM SMALL
CORMS.

TO THE EDITOR:—

About how much difference in time is required for the various sizes of Gladiolus corms to come into blooming? Taking some one standard variety for example, if it takes on an average a certain number of days for a 2 inch bulb to bloom after planting, about how many days would it be reasonable to expect that $1\frac{1}{2}$ inch, 1 inch and $\frac{3}{4}$ inch bulbs, respectively, all planted at the same time, would require to come into blooming?

From time to time lists have been published in your magazine giving the number of days it has required for different varieties to bloom for certain contributors, but I believe in none of these has the size of the corms been stated. In Mr. Crawford's excellent work on the Gladiolus he says that small bulbs require a longer time to mature than large sized ones, but no hint is given as to how much longer, or the amount of the relative difference.

It seems to me that some information from a reliable source on this question would be appreciated by beginners or those of your readers who have not yet had experience enough to be able to properly plant their various sized bulbs to insure a continuance of bloom over a long season.

H. G. R.

Note by the Editor—

Accurate information as to length of time it will take from planting to blooming of any given size corm of any given variety is a very difficult thing to obtain, but we hope that those who have records or can offer even rough suggestions, will reply to the inquiry by "H. G. R." as fully as possible. It is, of course, well known that small size corms take a longer period for blooming than large size and also, speaking generally, they throw a smaller flower spike. The condition of the corm when planted has much to do with the length of time it will take to bloom. A corm which is dormant (well cured and has not started roots or sprouts) will take from one to three weeks longer to bloom than a corm which has already sprouted and perhaps started roots. The dormant corm is more likely to produce a satisfactory spike of flowers than the one which has started, but it will take longer to bloom. Another point is the strength of the corm. A strong, young corm which is tall in proportion to its diameter will

bloom earlier and throw a better flower spike than a flatter corm of the same diameter.

Any helpful suggestions along the line of "H. G. R.'s" inquiry will doubtless be appreciated by many different readers.

A QUESTION OF PRONUNCIATION.

TO THE EDITOR:—

On page 81-82 in the June number of THE MODERN GLADIOLUS GROWER, I notice that you state, "that the acquiring of the newer and correct pronunciation with the accent on the "di." Now I would like to know by what mental process you have determined the "correct" pronunciation.

If you refer to the Standard Dictionary you will find that Gladiolus is the only pronunciation. Of course Webster says that both pronunciations are correct, and if both are correct, one cannot be more correct than the other.

Again the Encyclopedia Dictionary says that Gladiolus is the only pronunciation, while the Oxford Dictionary agrees with Webster that both pronunciations are correct.

In the Florists Manual Dictionary of Botanical names, I find 187 four syllable words giving the accent on the third syllable, so there is plenty of precedence and justification in the placing of the accent on the third syllable of Gladiolus.

Please compare the pronunciations and formation of the following words:

Glo ri o sa—Glad i o li—Scab i o sa.

I think every argument is in favor of the old pronunciation. There is no question but what the other pronunciation is newer, but I believe it is not an improvement.

CLARK W. BROWN.

EARLY CUTTING OF FLOWER SPIKES TO
IMPROVE STRENGTH OF CORMS.

It is generally known that in order to encourage growth of corms and cormels it is not well to allow the flowers to remain for seeds to mature, nor is it well when cutting the flower-spikes to cut so low down as to remove most of the foliage. The generally approved procedure is to cut the spike when the first flower is opened, not cutting away more than the upper pair of leaves, if indeed any leaves are cut.

Last year I thought I would see what difference would result if I went beyond the orthodox plan. In five rows of *Pendletons* I proceeded as usual, cutting the spikes when the first bloom opened; all

but the middle row. In that row I pinched out the buds just as soon as they appeared, so that the strength that would have been used in maturing the buds might be diverted into greater root-growth. I waited with much interest the time for digging, wondering whether I should find the greater gain in corms or cormels. To my surprise there was no perceptible difference between that row and the others, so that at least in that case there was the loss of the flowers and no gain in either corms or cormels.

Possibly this mention may save some one else from repeating a foolish practice.

C. C. MILLER.

GLADIOLUS PRICES.

A surprising thing about getting together a collection of fine named Gladioli has been the amazing range in price quoted by various growers for the same varieties: *Badenia* quotations range from 50c. to \$3.00 per bulb; *Blue Jay*, 20c. to \$1.25; *War*, 10c. to \$1.00; *Schwaben*, 15c. to 60c.; *Senator Volland*, 10c. to 60c.; *La Luna*, 10c. to 50c.; *Goliath*, 25c. to \$1.00; *Heliotrope*, 20c. to \$2.00; *Le Triomphe*, 25c. to \$2.00; *Prince of Wales*, 25c. to \$1.00. One bulb of each of the above, at the top price would cost \$12.95 while at the lowest figure only \$2.10. There seems something curious about such a range of price as this. The writer bought over 100 varieties at the lowest prices he found quoted and in every case except two received fine, plump, young bulbs, so quality does not seem to be the reason.

C. M. S.

Growing Gladioli for the Market.

Many people have an idea that Gladioli are exacting in their demands upon the soil, but this is not the case. Successful growers of these popular flowers have been known to use one plot of land continuously for ten or fifteen years, with no other fertilizer than well rotted manure and hard wood ashes spread over it before plowing in the autumn.

When raising Gladioli for cutting, the corms are planted two to four inches apart in double rows made about a foot apart. The depth in the ground depends upon the size of the corms, and so varies from two to four inches. Considerable watering is desirable occasionally when the local character of the soil or lack of rainfall demands it.

As soon as the first flower opens, the spikes are cut and placed in water, care being taken not to overcrowd them. The

terminal buds are then removed to check development of the stalk and throw all possible strength into the large and early blossoming flowers. About three days after cutting are required to bring the spikes into bloom, and so proper allowance must be made for the date of their intended use. Every day the water must be renewed and the stalks shortened a little, cutting them diagonally to insure ready absorption of water. Opening thus in the shade modifies the color of the blossoms from bright tints to delicately subdued blendings.

Gladioli are easily shipped hundreds and even thousands of miles by standing them on end in suitable baskets or boxes. If, upon arrival, the terminal buds are removed and the ends of the stalks are cut off diagonally, the flowers will revive rapidly when placed in water and with daily care will remain in good condition for a week or more.

At the end of the season the corms are dug and the stalks cut off close to them. This must be done before the ground freezes, but it is not necessary to wait until the plant dies down; a few weeks after the blooming period is ample to mature both for this purpose. During the winter the corms are placed in shallow baskets or boxes and stored in a cool, dry place.—PHIL. M. RILEY in *Country Life in America*.

The National Flower, Plant and Fruit Guild.

Our attention has been called to the above organization with headquarters at 70 Fifth Ave., New York, N. Y. Its purpose is to distribute surplus products of the farm and garden to the sick and poor of the big cities. The guild as organized shows an absence of red tape and tiresome regulations, and flowers, fruits and vegetables may be sent under the free label of the guild direct from the giver to the person or institution for which it is intended. Express labels carry free for a distance of 100 miles or less packages weighing not more than 20 pounds.

Those interested should find out their nearest largest city within the distance mentioned and write to the address given above. If interested in any particular hospital or other institution, full names and addresses should be given. Ask for blank applications of the guild which will be sent upon request.

Necessary equipment for sending packages including free express labels, record postcards, etc., will also be forwarded.

Garden Gladioli.

Most Common Varieties are Complex Hybrids Representing a Number of Distinct Species—Success Suggests that More Species Should be Used in the Production of New Horticultural Forms of Other Flowers.*

BY ALFRED C. HOTTES.

Department of Floriculture, Cornell University, Ithaca, N.Y.

THE Gladiolus offers an excellent example of a genus of plants which has been improved for garden purposes by the incorporation of a number of species into more complex multiple hybrids than most of the flowers of the garden. The China aster (*Callistephus chinensis*), sweet pea (*Lathyrus odoratus*), peony (*Pæonia albiflora*) and Boston fern (*Nephrolepis exaltata* var. *bostoniensis*) have been improved solely by the selection of variations and mutations within a single species. Phlox, German iris, larkspur (*Delphinium*), dahlia, columbine (*Aquilegia*) begonia and chrysanthemum varieties have arisen from the hybridization of several species. The rose, orchid, pelargonium and Gladiolus, however, often have in the make-up of their best varieties three to seven species, each contributing characteristics to the modern degree of perfection.

The genus *Gladiolus* consists of approximately 130 species, most of which are natives of South Africa, though several are of European origin. Previous to 1840, only a few forms commanded any attention horticulturally. One was the hybrid species *G. Colvillei*, a rather dwarf plant with flowers characterized by a white area or lozenge in the throat, bordered by a deep color; a feature inherited directly from its parent, *G. cardinalis*. *G. tristis* var. *concolor* was used as the other parent of *G. Colvillei*.

Another form was known as *G. ramosus*, a branchy plant which resulted from crossing *G. oppositiflorus* with various hybrids (now unknown) of *G. Cardinalis*. *G. oppositiflorus* is a native of Madagascar and Natal, and bears a stem three to six feet tall which produces large, white flowers with characteristic amethyst stripes in the throat. Twenty-four or even forty blooms are borne upon the stem, twelve of which are often open at one time. This tall, white, many-flowered species was

crossed with *G. cardinalis*, a bright scarlet and rather dwarf species. The result of this crossing was *G. ramosus*, at that time thought to be quite admirable.

In 1837 Beddinghaus, gardener to the Duke of Aremburg, had growing on the estate in Engheim the *G. ramosus* hybrids, and besides these the Parrot Gladiolus, *G. psittacinus*. In this the upper segment is scarlet, with deep yellow medial line, and is also spotted with yellow at the base; the lower is rich yellow and scarlet. The plant grows to a height of three feet and is clothed for the most part by the sheathing bases of the leaves.

MYSTERY OF GHENT VARIETY.

The species *G. ramosus*, *G. oppositiflorus*, *G. cardinalis* and *G. psittacinus* were crossed rather promiscuously. In 1841 a form appeared which was thought to be superb. In *Flore des Serres* was published an account of this new type, and it was said to be a hybrid between *G. cardinalis* and *G. psittacinus*. However, Dean Herbert and others, after attempts to cross these later species failed and declared that the new hybrid was *G. psittacinus* and *G. oppositiflorus* instead. A controversy over the parentage has raged since then, but to the writer the explanation is simple in saying that the new hybrid was *G. ramosus* (*G. oppositiflorus* by *G. cardinalis*) crossed with *G. psittacinus*. This is substantiated by the fact that the new form contained features from each. Louis Van Houtte obtained the stock and advertised it as *G. gandavensis*, naming it from Ghent, Belgium, and describing it in glowing terms as bearing majestic flowers, numbering eighteen to twenty, of the most charming vermilion, the inferior petals adorned with chrome, amaranth and brown. He writes: "All Ghent comes to admire it. In stateliness and color it exceeds all others we have among Gladioli."

Napoleon III was much interested in the amelioration and introduction of new plants, and so it was that *G. gandavensis* came into the possession of Souchet,

* Address before the twelfth annual meeting of the American Genetic Association, at Berkeley, California, on August 5, 1915, and printed in *The Journal of Heredity*.

gardener of the Emperor. Souchet worked with it, developed by hybridization and selection its form, color, size and arrangement of flowers until it became a valuable addition to our garden plants. *G. gandavensis* can be characterized as having many flowers open at the same time, being of great size and of good substance, having rich colors, handsome and somewhat angular form, often having light areas or penciling in the throat. The flowers are arranged in two rows on a tall spike in such a way that each flower appears attractive. The spikes are very erect and quite stiff.

Some few years previous to 1878 the species *G. purpureo-auratus* came to the attention of that master French horticulturist, Victor Lemoine, who began to use it with improved forms of *G. gandavensis*. By this time, the group had been materially improved by Souchet, Brunelet and Souillard. Lemoine immediately realized the possibilities of this species, which was introduced into France in 1872. *G. purpureo-auratus* is pale yellowish-green and bears upon the lower segments of the flower admirable diamond-shaped blotches of maroon. The flowers are bell-shaped, rather hooded, pendent, far apart and face one direction. The foliage is somewhat glaucous, narrow and stiff. The stems are slender, wiry and inclined to be curved. The corms bear many short underground stems tipped by clusters of cormels. The flower was not beautiful, but Lemoine realized that combinations of the *G. gandavensis* varieties with this new species would result in something unique.

LEMOINE'S HYBRIDS.

In 1878 Lemoine exhibited at the International Exhibition at Paris a number of these hybrids and called them *G. lemoinei*. The stems are wiry, slender, graceful, inclined to be curved, but the spikes have the ability to open only a few blooms at one time. Many of the varieties have too strong a tendency toward being bell-shaped, to the extent that the interior of the flower is not readily seen. The flowers are rather smaller than *G. gandavensis*. The colors are exceedingly rich and the lower petals of the blooms are usually blotched, a feature gained from *G. purpureo-auratus*. The blotches are deep, velvety and very striking. Enthusiasts have ventured to say that some of the richest colorings in the plant kingdom are found in the lemoinei. *G. purpureo-auratus* is about the hardiest of the African species and has contributed this quality to the hybrids. Many of them

are hardy, even in the region of New York City. A moment's consideration will show that the rich petal coloring has been derived from the species *G. psittacinus*; the blotch, hardness and graceful stem from *G. purpureo-auratus*; and the vigor, erectness, and perhaps the great number of flowers, from *G. oppositiflorus*.

Lemoine's next work was to influence the form and colorations of the *G. lemoinei* by using the species *G. saundersi*

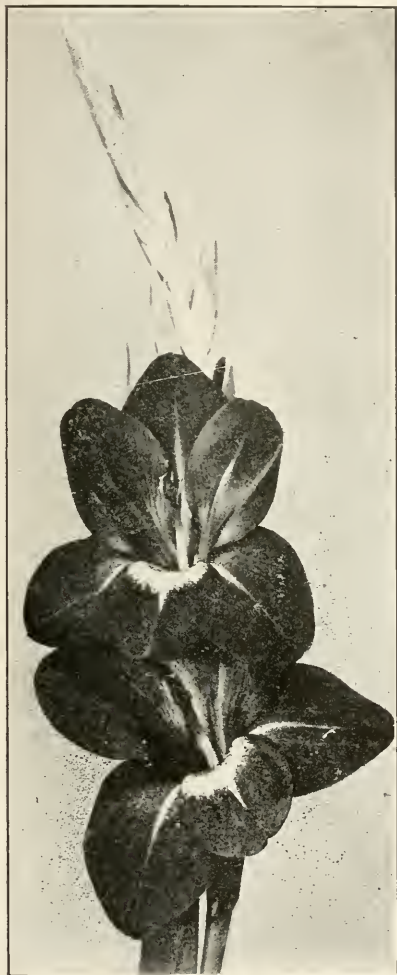


SAUNDERS' GLADIOLUS.

This brilliant scarlet species (*G. saundersi*) has an amber white throat finely dotted. The openness of its throat is marked, and it has been particularly prized by hybridizers for that reason. It has been used in the creation of many modern garden varieties of Gladioli, to produce well open blooms and clear white throats. Adapted by Hottes from the *Botanical Magazine*.

which is truly a beautifully colored species, even in its unimproved form. The flowers are brilliant scarlet with a pure white center, finely dotted scarlet. They are very open, being faulty in this respect. The plants are dwarf and weak-stemmed; six to eight large hooded flowers are borne upon a stem usually less than two feet tall. The leaves are short and glaucous.

Using *G. saundersi* with the best varieties of *G. lemoinei*, a new group was introduced in 1886 named *G. nanceianus* from Lemoine's home, Nancy, France. *G. lemoinei* was used as the pollen parent. Reciprocal crosses did not appear to be identical. The *G. nanceianus* varieties are characterized by being very large (larger than *G. gandavensis* or *G. lemoinei*), very well open as contrasted with



PRINCEPS.

This amaryllis-like Gladiolus is one of 2,000 produced by Dr. W. Van Fleet; its interesting pedigree can be seen at the end of the text. In color it is rich crimson with a magnificent, large, white throat.

lemoinei. The open flower looks one in the face, as the side segments are spreading. The throat is marked with peculiar mottlings of fine, short strokes of contrasting color. The varieties vary much in vigor, some being exceptionally strong, others very weak. They are quite hardy. The colors are excellent, brilliant or subdued according to the variety.

Max Leichtlin, of Baden Baden, Germany, admiring the species *G. saundersi*, but realizing its faults, made a series of crosses with the *G. gandavensis* varieties and obtained a few rather pretty seedlings which he sold in 1882 to V. H. Hallock who, after ten years of hybridization and improvement, sold his stock to John Lewis Childs. In 1892, Childs placed these seedlings upon the market under the name of *G. Childsi*. The *G. Childsi* constitute a group of large, showy-flowered varieties which possess gigantic growth, rich colors, and pretty mottled throats. At first these were somewhat lacking in substance. Many of the varieties resemble *G. gandavensis* except that they are more open; others are quite like *G. nanceianus* except for the fact that the throats of the latter are richer and more often thickly marked.

G. turicensis has the same parentage as *Childsi*, and was originated by M. Froebel of Zürich, Switzerland; but because it has not been widely developed nor advertised, it is not of great importance.

Dr. W. Van Fleet produced a form which is much like an amaryllis in its clear, deep red. It is a cross between a *Childsi* variety, Mrs. H. Beecher, and *G. cruentus*, and is called variety *Princeps*.

THE MAID OF THE MIST.

Recently there has come to the attention of the Gladiolus breeder a species from the Rain Forest near Victoria Falls on the Zambesi River, which is pale golden-yellow, primula-scented, and known as the Maid of the Mist or *G. primulinus*. This species is rather straggling in form, often three to four feet tall, and bears four to five narrow hooded, rather small flowers. With this species many of the finest varieties of the other groups are being hybridized. Several seedlings of unusual merit have resulted from a cross between this species and the ruffled Gladiolus, the latter a development by A. E. Kunderd, of Goshen, Ind., who produced these charming varieties by selecting blooms showing a ruffled tendency. The ruffled-*primulinus* hybrids are exceedingly vigorous and of excellent colors. *G. primulinus*, according to Dr. Van Fleet, who has produced over 2,000 hybrids, is dominant



MRS. FRANK PENDLETON.

In the large flowers of this variety, salmon-pink with deep blood-red blotches in the throat, can be traced the influence of a number of distinct species of the Gladiolus. The form of bloom is that of *G. lemoinei*, the markings are from *G. purpureo-auratus*, while the stem cones from *G. gandavensis*.

over the deepest reds, subduing them to pure, soft, pleasing shades of orange, salmon and terra cotta, with deep and light yellow throats. Hybridized with the whites and light colors, the resulting progeny is cream, buff, ecru, lemon and canary, often without markings. Deep yellows, in which the blotches are eliminated, result from crosses with yellows of the other groups. Most of the hybrids inherit the hooded character.

It is interesting to note that it is mainly

one species which has contributed the blue color to the hybrids. This species is *G. papilio*, a purple one. Lemoine used his *G. lemoinei* and the result was a series of more or less blue hybrids very much resembling *G. lemoinei*.

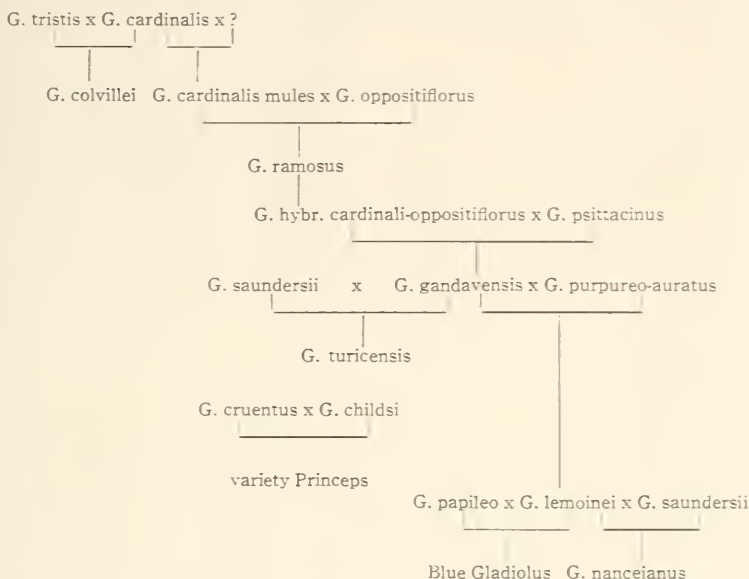
The foregoing discussion has concerned only a few of the species used, but it is hoped that the historical facts presented will show that the garden Gladiolus is a multiple hybrid, resulting from a series of species each valuable for one or more

dominant characteristics. Does not this bring out strongly the advisability of using a larger range of species in other plants? Each species in the practical hybridist's mind represents certain desirable characteristics to be incorporated into a hybrid. Too often there are many unfavorable features, the consideration of which is entirely neglected.

It must be admitted that greater prog-

ress can often be made with the interbreeding of established varieties, but when new features are to be added, the employment of new species is quite advisable or imperative. These should be the basis of hybridization. As years pass, the inferior seedlings may be discarded, and the ideal form may be far removed from the wild species; but the ancestor is necessary.

PEDIGREE OF SOME IMPORTANT GARDEN GLADIOLI.



"Some Common Plant Families."

Mr. Willard N. Clute, the author, calls this interesting and valuable little work "A Botanical Textbooklet." It consists of 45 pages and is printed in easily readable type and contains several illustrations of important subjects. As an assistance in identifying some of the lower plant families this little work is valuable for reference. On the Iris family, of which the Gladiolus is a prominent representative, Mr. Clute has the following to say:

"A third group resembling the lilies is known as the iris family (Iridaceæ). The members of the genus Iris have a general resemblance that makes them easily recognized, but other members of the family are quite unlike irises in appearance. They may, however, be readily separated from the lilies by their epigynous flowers, that is, flowers that seem to spring from above the ovary. From the epigynous flowers of the Amaryllidaceæ, the irises may be distinguished by the fact that they have but three stamens. All the Iridaceæ have a six-parted perianth, but in the flowers of

the genus iris there is a puzzling arrangement of sepals and petals that often confuses the beginner. The stamens, however, are opposite the sepals and this gives a clue to the arrangement of the other parts. There are about 1,000 species of the Iridaceæ, all of which are herbs and found mostly in the Old World. Nearly all are noted for the beauty of their flowers. Among familiar species are the Gladiolus, Crocus, blue-eyed grass and Montbretia. Orris root is the dried rootstock of a species of iris."

"Some Common Plant Families" is published by Willard N. Clute & Co., Joliet, Ill., from whom it may be obtained.

We look for reports of the browning of foliage and rotting of Gladiolus corms caused by the exceptionally heavy rainfall and cool weather which prevailed until after the middle of June this year. While the Gladiolus is a great drinker, yet it is susceptible to the troubles which result from "wet feet" the same as other vegetable growth. Wet soil is likely to result in severe damage.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Life History of the Bulblet— Method of Increase.

TO THE EDITOR:—

Will you kindly favor us with the history of the bulblet? The first year it is planted we assume that it makes a moderate growth, coming up perhaps to about third size bulbs. After that what happens? Will it reach first size the next year or will they be seconds or what, and will they produce bulblets the second year? I assume that after the first year's growth the bulblets are bulbs, and that they would require about the same care as any other bulbs, that is, that they should not be packed in sand after the first year.

Last year we found that certain varieties multiply nicely in large bulbs. Where we planted one, we frequently got back three. What is the rule or what would be the average say, with Gladioli in this respect? Will most of them give us back only one bulb where we planted one or are there many varieties that will multiply twos and threes?
C. B. W.

Answer:—While doubtless some of the large commercial growers could answer this question much more explicitly and more in detail than we can, yet we will try to at least give an outline of the information desired. Bulblets, or more properly cormels, are the first year's growth of the young plant from the old corm; and the first year the bulblet is planted, or what would be the second year's growth, it will make a bulb, or more properly a corm. The corm resulting from the first year's growth from cormel may be a very diminutive thing indeed, no larger than the cormel, or it may possibly be a first size corm. Nothing very accurate can be stated as so much depends on variety, weather conditions and cultural conditions. Cormels planted closely as in common practice will average to make corms ranging from fifth size to second size with perhaps the majority of third and fourth size. Thin planting and high culture, or what is known as rich soil will give much larger corms the first year from cormel naturally than thin planting in a poor soil. Just how long a period must elapse from cormel to first size corm cannot be stated for the reasons indicated above. A first size corm may result the first year from cormel although this is exceptional, or it may not result

until the third year. We might say that on the average perhaps first size would result the second year from cormel, but cultural conditions would need to be good. Size does not distinguish corms from cormels. The distinguishing feature is that cormels do not have foliage growing above ground while corms do have foliage. Cormels may be of much larger size than corms, but the difference is clear as above stated.

Yes, corms require the same care regardless of size and they should be dried or cured for safe keeping, whereas cormels should be kept packed in earth or sand and in a moist but not wet condition.

The multiplication of corms or division as it is called, depends on variety. Some varieties increase almost wholly in this way with few cormels, if any, whereas other varieties do not divide to any extent and increase largely by cormels. In this connection it should be noted that large old corms are likely to throw several sprouts with or without flower spikes and that such division results largely from mature corms rather than from younger and smaller corms. No rule can be laid down. Generally speaking one corm for each one planted is the rule, especially from young corms; as they get older the tendency is to increase by division but some varieties do not divide to any extent under any circumstances.

How and When to Prune Lilacs.

What is the proper time and method of pruning a Lilac?
V. G. C., Ohio.

Answer:—Prune every year if hand-some bushes covered with flowers are wanted. All flower clusters should be promptly cut off as soon as the plants have ceased blooming, and the multitude of suckers that invariably springs from the base of the common Lilac should be repeatedly removed throughout the season. The Lilac flowers on the wood of the past season's growth and must, therefore, not be cut back in the winter. Thin-

ning, however, may be done. Carefully examine the bushes in the winter time, and cut away the weak growths and crowded or superfluous branches, but do not cut back, as the flowers for the season would thereby be lost. Lilac bushes that have been neglected for a considerable time will be very tall and naked at the base, and will also be a dense mass of shoots. In such cases it is best to cut back in the winter-time, say within three or four feet of the base, to recover control of the bush and put it in proper shape. The flowers of the season will be lost but the bushes will break away freely, and form dense, handsome bushes, and, other conditions being equal, they will flower so freely the following season and have such perfect shape that the loss of the one season will be forgotten. Moderate pruning and disbudding of Lilacs can be done just after the blooming season. Thin out shoots where they appear to be congested, and rub against each other, and shorten back any straggling shoots that spoil the symmetry of the bushes. It is well to be cautious about summer pruning in general. When it is overdone, as it is apt to be in the hands of the inexperienced, its effect will be enervating to the subjects so drastically treated.—Copyrighted by *The Garden Magazine*.

The Little Lady's Doctor.

BY HARMON W. MARSH.

One of the chief charms of the lovingly tended garden is the series of surprises in store for the gardener as the seasons progress. It may be some unusual combination of colors, a clump in a border or the special development of some particular plant.

From day to day and week to week the interest shifts to different parts of the garden and every day brings its unexpected reward, for, no matter how carefully the gardener plans his work, the Almighty always takes a hand in the growth of a flower and distributes his benisons to the flower lover in ample measure.

In close proximity to a cherry tree, grape arbor and asparagus bed was a small, square bare place where an old hot bed had stood. The Man-of-the-House planted a double row of *Candidum* lilies across two sides of it and filled in the balance with English iris. While he could forecast the result in a measure he was utterly unprepared for the fulfillment and the more than usual approval of The Little Lady.

She cherishes a warm affection for a rising young physician who moved to the neighborhood a few months ago. He won his way into the hearts of the rest of the family by the manful and efficient service rendered when he was summoned on an emergency call and pulled the Little Lady through a serious attack of pneumonia.

While sufficiently grateful, that wasn't what attracted The Little Lady. Nor was it his square shoulders, vitality, earnestness, ready sympathy, fine face nor boyish enthusiasm, but his keen perception and appreciation of the finer things in life.

One evening as he was coming down the street in his runabout, he caught the Little Lady's signal, stopped his car and came up into the yard. Said The Little Lady, "Shut your eyes and let me lead you," which program was carried out. Pausing in front of the lily and iris bed, she commanded, "Now open your eyes."

The doctor obeyed, gazed a moment, reverently took off his hat and said, "The altar."

"Oh!" said The Little Lady, "I knew you would see the purple, gold-laced altar cloth in front of the white candles in the straight green candlesticks. As a reward you shall have a boutonniere of my choicest pansies."

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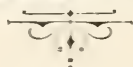
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No. 8

GLADIOLUS— CHARLEMAGNE

Charlemagne, in type, is a pure Nanceolans and a production of N. Lemoine & Son, Nancy, France. For best development of the flower spikes it seems to require quite a rich soil and then, it can be grown to large proportions. Leaves broad and spike medium in length. A prolific producer of very small cormlets.



The color is not readily classified and it usually carries the uncertain description of Sunrise Red, but glowing no-rose would seem to be nearer correct. A beautiful creamy throat suffused with purple completes the color description. *Charlemagne* is a fancy flower worthy of a place in any collection.

A Story for Flower Lovers.

A Description of the Flower Plantations of Willis E. Fryer, one of Minnesota's Best Known Flower Growers.

By CLARENCE WEDGE.

(From *The Farmer*, St. Paul, Minn.)

NO ONE who knows much about the horticulturists of Minnesota will dispute the right of Mr. Willis Fryer of Dodge County to the title, "King of Flower Growers of the State." I'm not bringing the greenhouse men into this. They're a

he has done all this under a physical handicap that would make many a man a burden to his family. To go over the flowers with Mr. Fryer, walking hour after hour, every step costing him three times the effort that it does the average



Partial View of Mr. Fryer's Iris Field. The variety Mrs. W. E. Fryer in the foreground.

class by themselves—a very honorable and necessary class. But of all the outdoor flower enthusiasts that I know of in this part of the world, Mr. Fryer has brought together and compared the merits of more phlox, iris, Gladioli, dahlias and peonies and such perennial flowers than any other one of my acquaintance. And he has not done this merely as the whim and fancy of a rich man—an outlet for an overflowing pocketbook—but has managed to do it so as to make them bring a profit. He has turned them into a beautiful and well-furnished home, an up-to-date automobile, and one of the best farms of the neighborhood. And this I have said for the purpose, more than any other, of adding that

man, and listen to his cheerful enthusiasm, would be the best possible tonic for a fainthearted person—like the words of the Master to the palsied man, "Be of good cheer!"

I had made up my mind this year that, come what might, I would take a day in iris season and again in phlox season to improve my education in the new and old things in these lines, by making a visit to the Fryer establishment. But when every day as you reach it is full of new work, it's hard to set the time and abide by it. And so I found the thirteenth of June, I had to make two close connections in order to make the sixty miles and back in one day, getting up in the small hours of

the morning. And when I woke up, it was about to rain and my wife said, "what's the use?" I thought so myself—a hundred and twenty miles just to see some iris, and sprinkling enough to wet the walk. But if you make plans and don't live up to them you never get anywhere, and so I made myself go. Slowly and reluctantly the clouds thinned out, with now and then a dash against the car window to try my patience, and by ten o'clock Mr. Fryer had met me at the station and was taking me out in his new "six" auto. I told him that his old car was good enough for a nursery man, and where did he get the money? But he just smiled and handled the new levers and looked over the works and told me he had good reports from the shipments of Gladioli he had made to Australia.

I have never in my life seen a more interesting tenth acre of flowers than Mr. Fryer's little patch of seedling iris in full bloom June 13th. No show of named varieties that I have ever seen together could begin to compare with it. As I took my first view within the shelter of young evergreens that enclosed it, the first thing that caught my eye, towering above them all, was the stately variety that he has named for his wife, Mrs. Willis Fryer. It is a flower of the largest size, carried on strong stems 34 inches high, the standards of very light blue, giving at a distance the impression of white, the falls of the richest purple veined at the base and bordered or shaded at the edge with lighter purple. The health and vigor of the plant gives every promise of putting this variety among the really useful sorts for general planting. I do not recall any of the standard varieties of its color equal to it. In general effect, it might be compared with the Reine Nixe, but it is a much larger flower and more impressive in every way. If Mr. Fryer had accomplished nothing more in all his experiments with iris in the past twenty years than the production of this one variety, it would have been well worth his time.

In the main, however, I was impressed with the richness of the yellow and yellow-tinted varieties in his seedlings. The Honorable may be regarded as the standard by which to judge the other kinds of this shade. For richness of color, there is nothing that I have ever seen superior to it, but it is lacking in height and inferior in size. At the south end of his seedling patch, Mr. Fryer showed a very productive kind much larger than the Honorable, equally rich in yellow, with falls of a darker and a more solid mahogany, that is carried on stems at least six inches

higher than that popular variety, of which it is no doubt a seedling. I am not sure that Mr. Fryer has named this variety, but he will certainly do so and it will be one of the things that I shall want to see on my own grounds as soon as possible.

He has named two varieties after his children, W. J. and Catherine Fryer, that may prove to be the most valuable of all the seedlings. They are both yellows of the largest size—the standards not quite so rich as the Honorable, but fully double the size and carried higher up, with falls of the deepest, velvety mahogany bordered with yellow. It is hard to choose between the two, but I think I should prefer the one he has named for his son. A bouquet of either one of them would cause a sensation anywhere they might be exhibited.

I have sometimes had inquiries for a red iris, which is so far from the natural color of this flower that it would seem like trifling with descriptive terms to suggest the possibility of there being any such thing. However, we found among Mr. Fryer's seedling collection two or three varieties of a rich mahogany red that it would be hard to describe without some mention of red. I do not now recall that he has given any one of these a name, but they are distinctive enough to demand special notice and should be of value as parents in working out seedlings of still stronger red. The iris is a difficult flower to describe and requires an artist in color to properly designate the shades that go to make up an individual flower. And so it is impossible to give anything like an adequate idea of the richness and beauty of this collection of hundreds of seedlings so diverse and interesting that it requires more than one visit to properly place the many good things that demand our attention.

The Siberian iris is a particularly interesting species on account of its extreme hardiness and its general adaptation to exposed places where the German and Japanese iris would be torn to pieces by storms. Its length of stem, sometimes approaching four feet or over, also adapts it to a variety of decorative purposes where the short-stemmed kinds would be of comparatively little value. As with the other species, Mr. Fryer has given this class considerable attention and I had an excellent opportunity to compare the merits of the different varieties. Of the long-stemmed kinds, Mr. Fryer considers the Superba the largest in flower and the most effective for general use. I saw it in a number of places on his grounds and it was everywhere making a very rich show. The

[Concluded on page 122.]

Gladiolus Growing for Pleasure.

The Gladiolus is easily the most popular out-door flower of to-day, almost every color taste may be gratified. The Gladiolus will thrive and give results with but little care, and again the most remarkable results will forward any extra care or attention that is rendered. A season of bloom from July until cut down by the hard frosts may be enjoyed by successive plantings. Even early in June flowers may be had, where the convenience of a green-house or hotbed is at hand. To start the corms that may be planted in the open after danger of frosts is over, a convenient method and one within the reach of all, is to use the ordinary square quart size berry basket, from one to three corms may be planted according to size, barely covering them and having the baskets about level full of earth. Ordinary garden soil with the admixture of a little sifted coal ashes makes a good compost, friable and easily drained, to which the roots will cling when the basket is removed prior to planting out. This is easily accomplished by cutting the corners with pruning shears, and sliding the entire "ball" out, which is then planted without disturbing the roots.

Plant so as to have the top of the corms at least three inches below the surface. A depression may be left about each one, which will catch the rains and also allows the sun's rays to penetrate and warm up the soil. Cultivating will gradually level up the surface. These deep planted Gladioli require but very little support when the plant is large and bearing a heavy flower spike. As a precautionary measure against the blue aphid or other insects that are sometimes found under the outer covering of the corms I always soak them for a few minutes in a tobacco or nicotine solution "Aphine" or any other good commercial product, using a solution slightly stronger than that recommended for spraying. This also acts as a repellant to any insects that might be in the soil.

The ideal fertilizer for any crop is well decomposed stable manure, but this is not always available. A "Complete" manure such as used for potatoes is an excellent substitute. Bone meal or pulverized sheep manure are also good. Alternating these with wood ashes fortnightly, cultivating after each application, and watering thoroughly when necessary. An occasional dressing of air-slaked lime is very beneficial in keeping the soil sweet. After the flowering spike is well defined,

a light application of Scotch soot and worked into the soil is grand medium for intensifying the colors of the flowers, especially the pink shades.

The real beauty of the Gladiolus is only realized in September or later, when the flowers have more substance, the colors brighter, and the spikes finished with a greater number of open flowers at a time. The blue heliotrope and lavender shades are especially fine; in July and August the hot sunshine and the pollenizing effects of insects cause the flowers to "go to sleep" almost as soon as they open.

For a long season of bloom the following method will be found convenient and practical: About April 1 take out all the Gladioli from the winter quarters and divide each variety in as many parts as it is desired to have plantings. Take paper bags and mark the planting dates on each, in the vicinity of New York City July 1 is about the latest safe planting date. To insure getting all the blooms, and assure ripening of the corms, select all the largest and heaviest corms for the last planting; all bulblets and small corms are best planted at the first planting; each set of bags according to planting dates are then placed in boxes, leaving the top of the bags open for circulation of air and prevent heating; these boxes are then placed in a dry, cool cellar until the special dates for various plantings occur. A good vegetable cellar is an ideal place. Of the many methods tried I have found this to be the very best, as I find but little shrinkage in the last lot planted. We plant double or zig-zag rows five inches apart, 24 inches between the rows. This allows convenience in cultivating and gathering the flowers. High cultivation sometimes renders it necessary to afford some support. This we furnish by driving stout Bamboo canes in a single line four feet apart, stretching jute twine down one side of the row and up the other side turning a loop around each stake. This allows a free circulation of air, and supports the spike as long as necessary.

When the Gladioli have all bloomed it is well to give a thorough weeding and cultivating, with an application of lime to the soil to sweeten it and release the latent properties of the fertilizers that have been used. This benefits the corms in the soil and insures good stock for the next year. Digging the corms should be done before the foliage becomes too much ripened. Six inches of the stalk may be

[Concluded on page 116.]

MRS. AUSTIN'S TALKS.

A PIONEER HOME AND ITS GARDEN OF FLOWERS.

"The kiss of the Sun for pardon
The song of the Birds for mirth
One is nearer God's heart in a garden
Than any place else on earth."

From the pewter cup Sophia took a small pinch of salt and sprinkled it on her piece of bread, then went out to the log house and seating herself in the doorway, slowly munched it. She knew it was eleven o'clock for the sun had just reached the edge of the second step which marked the time that Aunt Zelinda usually put potatoes to boil. But she was hungry, and O how she did crave that bit of salt. The supply had been getting a little short lately and only last evening Uncle Aaron had again cautioned them to use it sparingly, and had then told the children how, a few years ago, a neighbor had traveled horseback to the hamlet of Cleveland a distance of forty miles and brought the first barrel of salt that was ever in their county. How, on account of there being no road and only a trail through the forest, it had to be brought Indian fashion by being tied on poles dragged by the horse.

The doorway of the log house was Sophia's favorite place for she could watch the bees and birds among the fragrant blooms of the honeysuckle which had been trained up the trellis made of cut saplings. She felt a sort of proprietorship of it for since they had moved into the large new frame building she had used it for her playhouse, being careful to not disturb Uncle's oxyokes, flails, sickle, grain cradle, wooden plow and other tools stored there; all of which he was very saving for farming implements were difficult to obtain. She was just now planning to enlarge the area of her homestead by the addition of a flower garden, that is, if Uncle thought it advisable, and his sanction was most important. She wanted it for her very own and to tend it herself. Her plans were interrupted by two blasts from the conch shell which she knew were intended for her because that was the way Aunt Zelinda always blew, one short and one long, just as if she was saying, So-p-h-i-a. Aunt kept the conch shell on the mantel over the big fireplace now with other treasures which she had brought with her in the wagon on the long trip to the New Connecticut, for they seemed a part of

the old New England home and were very dear to her.

Sophia took the large gourd and brought water from the spring for dinner, resolving that she would speak to Uncle Aaron about her plan immediately after the noon meal. She had once heard Aunt Mary Ann, who was a maiden lady, say that it was of no use to ask a favor of a hungry man, and she watched furtively to see if he ate heartily.

When the subject was broached, Uncle, who was a thoughtful man and greatly interested in the training of his niece, expressed himself in favor of it but explained that there was much work and responsibility connected with it all of which would devolve on her and that she must not undertake more than she could well care for.

He said a garden required thoughtful planning, that he began planning his in midwinter, and that some of the things he was doing this season he had planned several years ago when he lived back east, but was carrying in his heart the vision of a home on the Western Reserve. The dream had become a reality, first the temporary log house, then the frame one which he had built with his own hands, for he was a carpenter by trade, and now, in progress, the garden of his ideal.

The Pioneer front yard like the parlor was usually kept free from intrusions, and a neat picket fence extended from each front corner of the house to the main road. One corner, near the house was sheltered by tall twin wild cherry trees, and their roots were blanketed with myrtle. An oblong bed had a clump of the early red "piney" at each end and clove pinks in the center, while under the windows on either side of the door were snowberry shrubs. Sprouts of the striped York and Lancaster rose were permitted to grow in natural wilfulness, bloomed freely and although cut down at least once a year, were equally brilliant the next season.

The dining room and kitchen were in one large room with outside doors opposite each other and the one from the dining side opened to a side yard which was the real flower garden and was also fenced in. There was a lattice frame over the door on which was trained a vine called Lady Washington's Bower. A space each side of the door was devoted to clumps of lilacs, hundred leaf roses, corn lilies and tiger lilies. Through the center of the garden leading from the door to the gate opposite was a walk made of rough flat stones and as they walked he told her the names of the flowers, and that in those

center beds he had planted mostly annuals that bloom the entire summer. There were several varieties of marigolds, petunias, verbenas, candytuft, and the fragrant mignonette. In the beds next to the fence were many hardy plants, ragged robin, bergamot, spikes of lavender, the green and white striped ribbon grass, butter and eggs, Canterbury bells, hardy



One of Sophia's descendants and her favorite flower which was unknown to the gardens of the early pioneers.

larkspur, fox glove, live forever, Spanish iris, tansy, feverfew, spearmint and peppermint. There were other raised beds which filled the space between the center beds bordering the walk, and those next the fence. When he and Aunt Zelinda had decided to come west, they had carefully planted and saved seeds from their own flowers and many of their friends had given them seeds and plants to be planted in the garden of the new home and which would be daily reminders of those left behind, and his eyes filled with sudden tears as he showed her the circular bed of gorgeous coxcomb grown from seed given by a dear one who had since passed away. Outside the gate and sheltering the spring was a sassafras tree always of interest to

Sophia. Sweet clover also grew luxuriously in both sun and shade.

On the other side of the house near the kitchen door was an immense rain trough or the Pioneer's cistern, in which she often watched countless little wigglers and which brought her, later, many a mosquito bite. It also afforded her a convenient looking-glass. In front of the door was a platform over which a pear-tree shed its young shade, and on which were hung shears and all such for the health of the tree. A little farther on were stately hollyhocks, and Uncle had enough seed of those so that he had a row the entire length of his cornfield. The woodhouse faced the kitchen, and in the space between grew many four-o'clocks whose fragrance was so pronounced that even to the purpling twilight of her life, their perfume brought back the golden beauty of the scene, and with it came the hum of Aunt Zelinda's spinning wheel in its accompaniment to her clear sweet voice in

"On the other side of Jordan
In the sweet fields of Eden
There is rest for the weary
There is rest for you."

Sophia had her garden, and through her influence many have made the world more beautiful by their love and culture of flowers.

MRS. A. H. AUSTIN.

Note by the Editor—

The photograph in Mrs. Austin's article this month is of Miss Evelyn Kirtland and the Gladiolus she holds is one of Mrs. Austin's originations which she has named after the young lady in the picture. The variety *Evelyn Kirtland* is one of the very largest known and took first prize last year at the Cleveland show for the longest spike and the largest flower.

It would seem that owing to the backward growing conditions early in the season that there might be considerable difficulty in having some of the best late varieties in bloom in time for the flower shows in August. However, it is these uncertainties that make competition at flower shows interesting. If conditions were always the same, the growing of flowers would be reduced to a mathematical basis, and the interest, therefore, largely lost. Human nature always contains a speculative or gambling element no matter how thoroughly subdued, and it is this primitive instinct that makes a good sportsman, and it takes a good sportsman to compete at flower shows. Uniform success every year is out of the question.

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
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Growers are invited to contribute articles or notes over their own signatures, but the Editor reserves the right to reject anything which in his judgment is not conducive to the general welfare of the business.

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Vol. III.

August, 1916

No. 8

Definition of an Amateur.

This subject as it applies to real amateurs does not seem to be readily settled, and it is noticeable that expressions from real amateurs have not been numerous. Whenever a real amateur does express himself, he does not agree with the classification which professionals would like to have applied. As an instance of this we quote from the Bulletin of The American Dahlia Society which prints a letter from Mrs. Charles H. Stout, Shorthills, N. J., which is as follows:

"Would it not be a good plan at either this or some other meeting of the executive board to plan the drawing of some sort of line between the professional and amateur? At last year's show a very fine exhibit was put in by a very wealthy person who, of course, has a professional in entire charge of the Dahlias. The entries were all in the amateur classes, but after the judging was over this gardener took orders in his own order book for tubers of his Dahlias. Many true amateurs who do their own superintending have much to compete with in such cases as this. In the National Dahlia Society this person would have forfeited all prizes."

This point to which Mrs. Stout refers is one of the most important ones in defining an amateur. We have not seen any contention that the wealthy growers who employ professional gardeners are entitled to recognition as amateurs, and we do not think they are entitled to such recognition. The real amateur is the man who is his own gardener and who grows for the pleasure or love of the work and

not for profit. The quantity of stock that he grows need not enter as a factor providing he grows as a diversion and not for the income.

We think one point has been definitely settled by the discussion during the past two years and that is regarding the selling of stock by amateurs. We do not believe that anyone now contends that the sale of small quantities of stock need turn an amateur grower into a professional.

MADISON COOPER.

Fuller Reports of the Gladiolus Shows.

In several numbers of THE MODERN GLADIOLUS GROWER subscribers have suggested that it would be of great interest and value if the Secretaries would make a fuller report of the shows, giving the names of winning varieties to all of which the writer readily agrees, but very few have any idea of the vast amount of work the Secretary has to do. I would cite one instance that last year at Newport over 250 entry cards had to be rewritten through the carelessness of exhibitors leaving those sent them at home—had there not been duplicate cards at hand they would have been disqualified.

This year the schedule has over 170

prizes—these cards have all to be written with the names and addresses of the exhibitor which is no slight task—what with other clerical work the poor Secretary's nose is kept on the grindstone from start to finish and sees less of the show than any one. If exhibitors would co-operate they can help greatly by handing to the Secretary the names of their winning varieties in the classes where a certain number of spikes of one color is called for—the writer will gladly furnish slips for this purpose at Boston—then he can furnish a list that will be valuable.—H. YOEUELL.

Note by the Editor :

Secretary Youell has given us above some idea of the difficulties which beset the office of Secretary at flower shows. The task of ascertaining the winning varieties in all the classes would be a difficult thing for a person with nothing else to do as there is no uniformity in the labeling of varieties and sometimes the exhibits are badly crowded for space. The suggestion, therefore, that exhibitors could greatly help by handing in to the Secretary the names of their winning varieties is a good one and it is hoped that it will be acted upon.

One of our correspondents asks for suggestions which will help to give a money return for cut flowers and corms, and we would be glad to hear from those who have had experience, especially in a small way. Such a problem is largely local and there are doubtless many different ways of securing a financial income from one's garden as well as the pleasure to be derived from the growing of flowers. Therefore, a record of experiences will be helpful.

Amateur growers planting less than 1000 bulbs have an opportunity of winning some good prizes in Class C at the coming show of the American Gladiolus Society. The list of prizes is a very attractive one and for the most part the prizes may be competed for by most any grower. The small amateur may not have such another opportunity.

American Gladiolus Society.

The following additional premium offers should be added to the list of prizes open for competition at the Seventh Annual Exhibition of the Society to be held at Boston August 11, 12 and 13, which was published in the June number.

Complete schedule may be had by addressing Secretary Henry Youell, 538 Cedar St., Syracuse, N.Y.

CLASS A.

P. HOPMAN & SONS, HILLEGOM, HOLLAND.

No. 38—\$10 First, \$5 Second—Best 25 spikes *Pink Perfection*.

CLASS B.

AMERICAN GLADIOLUS SOCIETY.

No. 49—Silver Medal, First; Bronze Medal, Second—Best exhibit of at least 15 varieties, 3 spikes each, correctly named.

CLASS C.

THE GARDEN MAGAZINE, GARDEN CITY, N.Y.

No. 87—The Garden Magazine Achievement Medal to the winner of the most first prizes in Class C.

Unsolicited Kind Words.

THE MODERN GLADIOLUS GROWER is just the help that I have long wanted and I have learned many things from its pages. I have grown Gladioli for nearly 60 years and am now 72. I have a large collection from many growers.

W. C. D.

You will find enclosed check for \$2.00. Please extend my subscription to THE MODERN GLADIOLUS GROWER. I find it very helpful and the best single flower journal published.

J. N. L.

The above from letters received from readers of THE MODERN GLADIOLUS GROWER are only samples of kind words which we receive nearly every day. THE MODERN GLADIOLUS GROWER has certainly been appreciatively received.

Gladiolus Growing for Pleasure.

(Continued from page 112.)

left on the corms to advantage. When first dug they should be spread out in a thin layer in a cool, airy place until thoroughly cured. After being well ripened and thoroughly dried the tops may be cut off close to the corm, the last year's corm removed, and then packed in thin layers about two or three deep in shallow boxes and placed in a cool, dry, frost-proof cellar. A thick lining of newspapers in the boxes is a good insurance against extreme drops in the temperature. —P. W. POPP in *Gardener's Chronicle of America*.

WAYSIDE RAMBLINGS.

GLADIOLUS PRICE VARIATION.

TO THE EDITOR :—

Your editorial on "Price Variation" in the July number of THE MODERN GLADIOLUS GROWER opens up a very interesting line of thought. The past season I faced the problem of disposing of some 500,000 surplus bulbs with small knowledge both of markets and prices. I solved it as follows: First, I decided that the florists and dealers were the trade I desired to reach, then I looked up the files of trade papers and catalogues to get a line on prices, sizes, etc.

The more I studied, the less I knew; there seemed to be no standard either of prices or sizes. My natural desire was to follow the lead and make prices according to sizes. But what was first, second, third, fourth and fifth sizes? Once in a while a fellow with a little more backbone than the rest quoted a definite size like $1\frac{1}{2}$ inch, which seemed a reckless thing to do when most everybody was trying to see how many adjectives they could find to indicate size without being definite about it. Finally, I concluded I would make my own standard and did so, as follows: 2 inch, $1\frac{1}{2}$ inch, 1 inch, $\frac{1}{2}$ inch. That is, any bulb that did not measure 2 inches in diameter went into the $1\frac{1}{2}$ inch class and so on down the line.

Having disposed of the matter of sizes, prices were next in order. After sizing everything up, I could only guess at it at best, as the rule seemed to be "all the traffic will stand," "if that don't suit we will take less." Now, that sort of an attitude never suited me; looks like poor business, so I went to my grower and asked him how much it cost per 1000 to raise Gladioli. His answer "Don't know," I think would be the general answer. However, he did have a fair idea of how much labor, fertilizer etc., was used, also how many bulbs were planted and how many harvested. By much figuring I finally arrived at some approximate results from which I manufactured my prices.

The article of "C. M. S." on page 100 (July issue) seems to illustrate the price matter nicely. While the commercial end is not quite so bad in its range, still, taking America for instance, there is no reason for the price ranging from \$3.00 to \$15.00 for first size. I admit that the yield varies with different seasons but the costs of preparing, planting and harvesting, etc., are there to tell you what your crop has

cost you. I disposed of my surplus^s at what, to me, were remunerative prices and had to turn down orders. (I might add that I do not deal in Gladioli but only sell what we grow.) I had many inquiries from dealers for quotations in 10,000 to 50,000 lots, but I notice that they did not seem to be willing to pay my price, or at least, they never came back.

When I can take what the goods cost me, add a generous profit and also a sufficient selling cost and dispose of that product, I am not afraid of losing any money.

Now, Mr. Cooper, there are just two things that you could help quite a number of us on and that is by telling us:

1. By what method do the growers and dealers fix their prices?

2. What is a first size bulb, anyway?

G. P. B.

Note by the Editor—

It is probably true that few if any growers of Gladioli, even those who grow on a large wholesale scale, are able to tell what the actual cost of growing is even during any given season. For the reason that definite costs are not known there is much variation in prices and doubtless many Gladiolus corms are sold at bare cost of production if not at an actual loss.

It is, we believe, pretty generally understood that a first size corm is $1\frac{1}{2}$ " in diameter or larger. Sizes above $1\frac{3}{4}$ " are sometimes termed selected or given special designation.

Any grower who has costs available will confer a positive benefit to the trade if he will but write us with some definite information along this line. The cutting of prices is a serious detriment to the trade and price cutting generally results from lack of definite information as to cost of production.

PRICES OF GLADIOLUS CORMS.

TO THE EDITOR :—

The article by "C. M. S." in the July number regarding the price of Gladiolus corms, and the editorial relating to it, lead me to relate my experience. Several different lots were purchased by me this spring, both named varieties and mixtures, with a great range in prices. Some cost me as low as \$1.00 for 75, and one collection of named varieties averaged 15c each. There were all prices between. I carefully examined each lot, and found that the rule was that price indicates quality—those that cost the most were the best. The cheapest bulbs were so poor that I was tempted to throw them

away. The highest priced were the finest by far, as good as any I have produced in my own garden. This little experience led me to the conclusion that price rules quality, in bulbs as well as in horses or real estate.

There is another point that I thought of when I sent in some of my orders for named varieties. It was late in the season, and I feared because of that fact I might get inferior bulbs, the growers probably having filled their earlier orders with the best. But I am perfectly satisfied that I got as good a deal as the man who ordered early. The latest lot I received were as fine as any I ever had.

R. E. BOOMHOWER.

GROWING GLADIOLI FROM CORMELS.

I have had very good luck in growing Gladioli from bulblets and have found a plan to keep them cultivated before they sprout. Bulblets are slow in coming up and as it is difficult to find the rows to cultivate them, I have worked out the following scheme:

I plant the bulblets first, covering them to the proper depth and then I sow onion seed close to the row at the usual depth. The onions are up in a week and show plainly where the rows are, and the rows can be cultivated long before the bulblets are up. The onions can be pulled and used as green onions for the table without disturbing the bulblets in the least as the bulblets are well below the surface and the onions grow close to the top of the ground.

D. C. F.

A LABOR SAVING WEEDING TOOL.

I find that a four tined potato digger is a very useful tool for weeding small stock after it gets too tall for the iron tooth garden rake. It slides in among the small plants and stirs up the soil and loosens the small weeds. I do not use it on large plants as it is apt to tear the stems.

S. E. SPENCER.

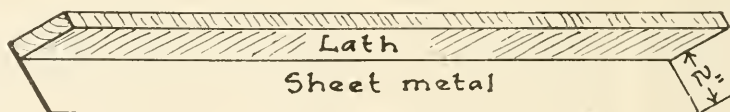
Secretary Henry Youell, Syracuse, N.Y., has received from Metzner Floral Co., San Francisco, California, a box containing 18 spikes of Gladioli. Considering the 3,000 mile journey they arrived in good condition, and Secretary Youell has suggested that an attempt be made to ship for exhibition at the flower show of The American Gladiolus Society on Aug. 11 to 13, 1916, at Boston. With greater care in packing and reasonable weather conditions it is hoped that bloom may be shipped from coast to coast in presentable condition. The strain which is being grown by the Metzner Floral Co. is of unusual size and contains some unusual color blendings.

Friends of THE MODERN GLADIOLUS GROWER have in some cases kindly offered to distribute sample copies among interested friends or at flower shows. This is very helpful indeed and for such a purpose we will be glad to supply free sample copies. THE MODERN GLADIOLUS GROWER proves a positive benefit to most growers of Gladioli, and it is, therefore, doing your friend a favor to let him know of its existence.

Device for Lifting Gladiolus Seedlings from Flats.

In growing seedlings in Florida I plant in flats, in rows about 2 inches apart and with a device I have made I transfer the

a strip of stiff sheet metal, nailed at right angles as shown in the sketch. I press the metal under a row in the flat, cut it out with a pointing trowel and lift out the two inch section with all the bulbs and plants undisturbed and lay in the



rows to the open ground without disturbing the roots. In the open ground I make the rows 18 inches apart. The device referred to consists of a piece of lath with

trench where they are to grow. The green leaves will soon perish and the bulbs start their second growth.

THEODORE L. MEAD.

Winter Storage of Gladiolus Bulbs.

BY S. E. SPENCER.

THE care of the bulbs through the winter is one of the most important problems which the grower must solve. It is comparatively easy to grow them and to get them cleaned and dried out is not difficult if one has good storage room, but very few dealers will accept delivery in the autumn or early winter. The mail order season does not begin till March, so it is necessary to provide a place for winter storage where they will be safe from frost or fire, where the temperature

concrete walls and floor and the floor above is steel and concrete. The walls above the first floor are built of hollow concrete blocks and the roof is covered with building paper painted with thin cement. This not proving satisfactory a heavy coat of tar was added which stopped all leaks. This main floor is used for a show room and shipping room during the flowering season, and when the bulbs are dug they are brought here, spread in shallow boxes and stacked up to dry



Exterior view of Mr. Spencer's bulb storage house.

can be kept between 40° and 50° and the air moist enough to prevent the bulbs from drying up.

For the storage of a stock of five hundred bushels or less a cellar is best for several reasons. It is easiest to protect from frost, can easily be made fire-proof, greatly reducing the insurance rate, and the humidity is about right to keep the bulbs plump and firm.

In a house cellar where a furnace is in use the air is likely to be too warm and dry, and after the bulbs are properly dried out some protection should be given to prevent shrinkage, and some ventilation if the temperature runs too high.

The building shown in the cut is 24 x 28 feet, and was designed to hold the bulbs grown on four or five acres averaging one hundred bushels per acre as they come from the field. The cellar has solid

with windows open. On stormy days the bulbs are sifted to remove dirt and bulb-lets and hasten the drying.

Before freezing weather all must be moved down stairs and placed in the racks ready for cleaning. These racks are built to keep the boxes three inches apart for ventilation. My boxes are 5 x 18 x 24, holding about one bushel. Some growers use larger and some smaller ones. The size is not important but they should not be over six inches deep and the bottoms of most of them should be ventilated. One lot made with window screen wire over the bottoms supported by lath nailed one inch apart were expensive but very satisfactory as no bulb-lets can shake out. After the bulbs are cleaned all except the smallest can be stored in boxes with slat bottoms, the strips being about 2 x $\frac{1}{2}$ inch and one-

half inch apart. Bulblets are kept on the floor in tight boxes, the large bulbs in the center, and small sizes, which pack closer and are more liable to gather moisture at the top of the rack.

A small stove in one corner is used when necessary to keep the temperature up to 40°. This cellar could be improved in one particular. If the walls were built of hollow blocks it would be a better protection from frost.

From January till planting time constant attention is necessary to prevent the bulbs from sprouting. If left uncleaned or if packed too closely in the boxes as soon as the temperature rises the roots will start. This is not serious if they are promptly dried off, but if not discovered in time the white sprouts will push out, making them unsalable and reducing the vitality of the bulbs.

With proper attention bulbs will keep in such a store room in perfect condition till mid-summer.

I intend before another harvest to greatly improve the facilities of this building by plastering the walls of the main room and installing hot water heat. This will enable me to clean the bulbs on this floor, ship away early fall orders, and the remainder can then be put in permanent racks in the cellar for the winter. This change will save one handling and provide a better place for cleaning and drying the bulbs.

The Iris Borer.

The irises are singularly immune from the diseases and insect pests that afflict the other denizens of the flower garden, but as is usually the case when one begins to cultivate a plant, various pests soon appear, and the iris is beginning to show that it is no exception to the general rule. Already there is an iris leaf blotch, an iris brand, an iris bulb scab and an iris rust, all caused by vegetable parasites, but the most dangerous of all the pests that threaten the iris is an insect whose larvae destroy the underground stems or rootstocks.

This insect, called the iris borer (*Macronoctua onusta*), is not very well known even to the entomologists and has apparently entirely escaped the notice of the nurseryman and florist but the latter seem destined to become will acquainted with it in the near future. Already it is causing great damage in the iris beds and growers of these flowers should be on the watch for it. It appears to have been confined originally to the wild species of iris in the Eastern States but has now spread to the gardens and has been found

in abundance as far west as Chicago. Usually it is said to be rather local in its operations being found year after year in the same spot, but it is likely to become more widely spread as plants from infected nurseries are distributed.

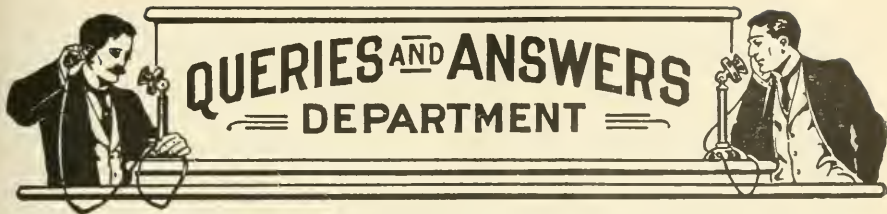
In late May or early June, just as the irises are ceasing to bloom, the first work of the insect may be noted in infected clumps. If the young leaves at the center of the cluster show the depredations of some chewing insect and other leaves in the cluster begin to wither and turn brown it is likely that the iris borer is at work. The insect soon works down through the tender parts of the plant until it reaches the rootstock where it completes its development and incidentally destroys the underground parts. If noticed early enough the upper part of the leaf cluster may be removed and the insect thus headed off without much injury to the plant.

According to Mr. Henry Bird who has made a study of this pest, the mature insect appears in September or October and lays its eggs on the bases of the old iris leaves. These do not hatch until the following May, and if the iris bed be burnt over late in the autumn it ought to soon dispose of the insects. Spraying the plants with arsenate of lead in May in anticipation of the attacks of the larvae is also suggested, but owing to the waxy bloom on the leaves it is difficult to make a spray stick. In digging irises for planting in new beds one should be careful that none of the pests are transferred to the new location. The full-grown larvae are about two inches long and nearly as thick as the little finger. They are pale flesh color with lateral black spots. The mature insect flies at dusk and belongs to the group known as Noctuidae. It is about two inches across the wings and colored a mixture of grays, purples and yellows.

At present the iris borer appears to be most plentiful in the Eastern States. Although its natural food plant is the iris it has been found on the blackberry like (*Belamcanda Chinensis*) and may in time extend its attention to the Gladiolus which also belongs to the Iridaceae. There is a short account of this insect with an illustration and bibliography in the New York State Museum Bulletin No. 155.

WILLARD N. CLUTE.

We invite articles however short on other outdoor flowering plants as well as the Gladiolus and especially the outdoor flowering bulbs. Articles on the iris and the dahlia, both of which are deservedly popular, are especially wanted.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Bonemeal for Roses.

Horticulture Pub. Co.:

Your article on rose culture in issue of March 25, written by Arthur C. Ruzicka, recommends liquid manure only. I have always found bonemeal necessary. Bonemeal is not soluble in water. How about it? CONSTANT READER.

I was wrong in stating that bonemeal was not soluble in water. What I really meant was that a large portion of it will not dissolve at once, thus wasting quite a little, and it is always waste that will eat into the profits of the growers. If you will watch my articles you will see I recommend plenty of bone both in the soil and applied all fall and early winter. If this is done as we do it the liquid manure will suffice in the spring and there will be very little unused bone going out with the soil. Growers who can use all their old soil to good advantage will not have to be so careful for they will get it back in hay, corn or whatever crops the old soil is used for. I could not recommend heavy applications of bone meal in the spring on plants that are to be thrown out and feel right about it for I know from experience that a good portion of the bone is not consumed. We use plenty of bone in the fall and early winter, as I have stated above, and I advise others to do the same, and will again when fall comes around if I am still here to write for *Horticulture*. As for using other preparations such as tankage, blood and bone, etc., I often use all of them, but find it rather difficult to advise others to do so, owing to the fact that *Horticulture's* circulation covers the whole country and what we would call tankage here may be something altogether different elsewhere as far as actual analysis goes. If there was only one brand of bone, blood and bone, sheep manure, etc., it would be very simple, as growers could not go wrong. There are many places both private and commercial that have no facilities for applying liquid manure. We receive many letters which are often answered by mail, asking advice as to this or that, and any good fertilizer or other article used in the

greenhouse or garden will not go unrecommended where the user will profit by it. There are plenty of wide-awake growers who are always on the lookout for new things that are better than what we have had, thus insuring sales for any good article well advertised.—*Horticulture*, Boston.

Rochester White Lacking in Vigor.

TO THE EDITOR:—

Last spring I purchased some *Rochester White* Gladiolus corms. They were represented as a valuable variety of white Gladioli. Out of the corms purchased at least one-fourth of the plants are sickly and weak and will apparently soon die. The others are maintaining only a half-hearted existence.

Is *Rochester White* really deficient in vigor and stamina, or do you think that my cultural conditions have something to do with it? I am growing 40 other varieties and they are all flourishing.

T. T. H.

*Answer:—*The variety *Rochester White* cannot be called a strong grower. Nevertheless, it is a fine variety and worth experimenting with. We grow it successfully and although we lose some corms each year from disease, yet when well grown *Rochester White* is a fine thing. It is a slow increaser and this is another disadvantage of the variety.

You should take good care of those plants that are doing fairly well and you will probably get some fine corms of your own growing for another season's bloom. When you grow *Rochester White* to perfection, we are very sure that you will like it.

The editor has had in preparation for some time an article on the construction of crates for shipping cut Gladioli. This article should have appeared before this and especially as the drawings are ready for illustrating it. Neglect is the only excuse. This article will illustrate the crates successfully used for several years by Arthur Cowee and the crates used by the editor for the past two or three seasons. Both methods ship the flowers upright standing in water.

The Gladiolus Society of Ohio.

Annual Flower Show.

The fourth annual flower show of the Gladiolus Society of Ohio will be held in the Hollenden Hotel, Cleveland, Ohio, on Friday and Saturday, August 18 and 19, 1916. We were unable to secure a copy of the premium list in time for publication, but copies can be had on application to Wilbur A. Christy, Secretary, Warren, Ohio. Copies will be furnished to members and on request to all intending exhibitors. All who expect to exhibit should notify Chairman of the Executive Committee, R. E. Huntington, Painesville, Ohio, giving the number of vases and amount of space desired.

A Story for Flower Lovers.

[Continued from page 111.]

Grandis, I should call the next in value. It is much like the Distinction but with longer and lighter colored falls. These two, with the Alba or white Siberian, would make a trio of the most useful of the long-stemmed sorts. They are entirely distinct and worthy of a place in any lawn where the iris is used for decorative effect. Of the later blooming and shorter stemmed varieties, the Orientalis and Snow Queen are quite indispensable, blooming as they do just after the German varieties, and like their longer stemmed sisters, of extreme hardness and wind-resisting qualities. The Snow Queen is almost in a class by itself and always attracts a great deal of interest wherever it is grown.

Mr. Fryer was one of the first in Minnesota to experiment with the new Hydrangea, Arborescens, or Hills of Snow, as it is sometimes called, and I was pleased to find that he regards it as "one of the finest shrubs there is." He has had blooms measuring 15 inches in diameter. He says that with him it begins in June and with proper trimming he can pick flowers as late as September. He has a method of trimming that increases the time of bloom on older plants. He leaves the center of the bush with little or no trimming for early blooms, and by cutting back the outer branches, all around the shrub, gets a crop of later blossoms from them. His older plants are doing well out in the full exposure, but knowing the natural habitat of the plant to be in shady places, I am inclined to think that with partial shade he would have even more success than he has made in this new and valuable shrub.

The record breaking hot and dry weather which has been experienced during July, following an unprecedented cold and wet spring has caused such unusual conditions for growing crops that just what will happen to the Gladiolus crop is uncertain at this time. As growers well know, buds sometimes "sunburn" to an extent which seriously interferes with their value; and lack of moisture, of course, produces results which are too well known to need explanation.

An error was made in Class 87 of the Revised Schedule of The American Gladiolus Society for the Boston show in August. The achievement medal was offered by The Garden Magazine, Garden City, N. Y., and not The Garden City Magazine as stated. Secretary Youell requests us to make this correction.

The growing season this year continues to be unusual. Following a cold, wet spring, which extended pretty nearly to July 1st, the month of July has been unusually hot and in some places dry. It would seem that it will be difficult for some growers to have their late varieties in bloom in time for the August shows.

W. E. KIRCHHOFF CO., Pembroke, N. Y., growers of the finest Gladioli, such as Pendleton, Panama, Niagara, Pink Perfection, Europa, Mrs. Fryer, War, Peace, etc. Correspondence solicited.

If you are a professional, commercial, or amateur grower, you will find the columns of

The Gardeners' Chronicle of America

brimful of helpful knowledge on plant culture—based on scientific, practical experiences—not on theoretical conclusions.

In addition to its contributed articles by well known authorities on horticultural subjects, digests of the leading topics appearing in American and European horticultural journals are regularly published in the Chronicle.

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THE CHRONICLE PRESS, INC.
286 Fifth Ave., New York, N. Y.

Derby Gardens Gladioli

List on application, also Wholesale list for growers.

John H. Umplesby, Lake View, N. Y.

R. F. D.

DEPARTMENT OF FLORICULTURE
SEP 1 - 1916

THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.
Published Monthly by Madison Cooper, Calcium, New York.

Vol. III.

SEPTEMBER, 1916

No. 9



GLADIOLUS—*BRENCHLEYENSIS*.

[For description see page 131.]

American Gladiolus Society.

Annual Show Held Under the Auspices of The Massachusetts Horticultural Society at Horticultural Hall, Boston, Mass.,
August 11, 12 and 13, 1916.

THAT the show in Boston this year was the best ever held by the society was generally conceded for although the Newport show of last year rivalled it perhaps in some respects in choiceness of exhibits, the co-operation of the Massachusetts Horticultural Society with the Gladiolus Society made a combination very desirable. Every facility was offered and thus the arrangements were fine. The attendance was very large. Sunday the building was crowded all the afternoon and Boston people turned out in very large numbers.

It was largely a show of varieties illustrating the variations in the breeding of this flower. No particular attempts were made to illustrate the flower in a commercial way and very few attempts made at an artistic arrangement. From the standpoint of a florist who would restrict production to varieties that could be easily made up into designs, the show must have been disappointing; but from the standpoint of the amateur who has been breeding new varieties himself or from the flower lover who enjoys rich colors without regard to their selling qualities, it was a grand success.

There were three exhibitors whose displays stood out above all the rest. One might be called a professional display, that of John Lewis Childs, and the other two amateur, those of President Fairbanks and Mr. Havemeyer. The three could hardly be compared in picking out a best although Mr. Fairbanks had a display equal to any ever seen before in a Gladiolus show. But Mr. Havemeyer being more distant from his fields brought a smaller number of flowers but very choice ones. Mr. Hendrickson put together his long experience and love for the Gladiolus with the immense resources of the Childs establishment and the result was a wonderful display of *Childsi* and other well known varieties.

Mr. Fairbanks had a bewildering display of a great many kinds. His main exhibit was made up of large baskets filled with one variety, all arranged along one side of the main hall so that it made a picture long to be remembered. His exhibit was particularly noticeable for its display of Kunderd varieties. The display

of Kunderd's *Primulinus* hybrids was magnificent. Here could be found all the new colors of buff, orange, salmon and yellow, in flowers of standard size and flowers of delicate size with slender stems. Two varieties in Mr. Fairbanks' exhibit that stood out from all the rest were the new *Julia M. Fairbanks* which took the prize at Newport last year and *Red Emperor*. The former attracted attention by its delicate shading of lavender and dark center and the latter by its immense size, being shown in baskets with 25 or more blooms together. The display of Mr. Fairbanks in the class of one spike each was a wonderful one, having blooms from all of the best of producers. In this collection were to be seen several of Dr. Hoeg's productions which have been attracting considerable attention in the east.

Mr. Havemeyer contested in the smaller class of fifty varieties and it is safe to say that never before were fifty more beautiful Gladioli brought together on one table. *Golden Measure* held the place of honor although *Elizabeth Krehl* gave it a good second for a yellow. In the blues he showed *Badenia*, of which very few were seen at this show, *Heliotrope* and *Saphir*. This exhibit contained the cream of the world in Gladioli and was the center of attraction. Mr. Havemeyer showed a large basket of a new heliotrope shade, *Muriel*, one of Pfitzer's ground color was light with a dark blotch, petals somewhat reflexed. Another striking display of his was a large basket of *Madame Mounet Sulley*, one of Lemoines'.

The Childs exhibit was mainly of one spike each although here could be found a fine vase of *Gretchen Zang*. The well known Childs appeared to good advantage. *Contrast* and *Dazzler* were among the finest. Improved *May* blossomed out on this occasion with a new name and will hereafter be known as *June*.

From the Sunnyside Gardens Mr. Gage had quite a large display of his novelties including one of the grand features of the show, a vase of *Dr. Norton*. Beautiful spikes of this grand flower, another of Mr. Kunderd's creations, were shown. This with the *Julia M. Fairbanks* were the two gems of the exhibition. Mr. Gage's

Modesta was also exhibited, an odd butterfly combination. His collection of *Pendleton* seedlings was represented by varieties of nearly every shade.

Mr. Spencer of Woburn has been doing a lot of original work with *Glory* as a seed parent and *Peace* as a pollen flower. He exhibited quite an array of the seedlings from this cross, most of them taking the ruffled form. Several of them had novel combinations of color and gave much promise. Mr. Spencer has in the past been a large commercial grower but handling only a few varieties. But the last few years he has added many new ones. He showed the only vase of *Glory* of *Noordwijk* and his vase of *Pink Perfection* took first prize. A new creamy white of great vigor which he will soon introduce is to be called *Zaidee*.

Mr. Brown of Ashland, was represented by his sons as he has been ill for some time. This firm have been doing original work for several years and showed a vase of seedlings of considerable merit. One only had been given a name. A light pink with yellow centre, overlaid with a carmine blotch, was shown, named *Rosy Morn*. Kunderd's *Violet Glory* was shown in this exhibit.

Mr. Meader of Dover, N. H., can always be depended on to furnish something good and this time his vase of *Heliotrope* took first prize. An odd one represented by only one bloom as it is a late bloomer, was *Tiger*, one of the best of the so-called chocolates. Mr. Meader also exhibited Kunderd's *Lily White* and got honorable mention for it.

Mr. Cooper of THE MODERN GLADIOLUS GROWER, brought quite a number of varieties and took several of the prizes. One interesting thing about one of his prize winners was the fact that it was composed of six blooms of Mrs. Austin's *Herada*, the only six bulbs that he had. That they should all be in bloom at the same time and win a prize for excellence was considered quite remarkable. In this connection it might be stated that three of Mrs. Austin's varieties, *Evelyn Kirtland*, *Gretchen Zang* and *Herada* were quite in evidence at the show.

Mr. Swett of Saxonville, and Mr. Cogger of Melrose, had quite large exhibits of the standard varieties but neither presented any novelties. J. Zeestraten of Stoughton, and his brother Charles Zeestraten of Chautauqua, N.Y., had several varieties on exhibition, the former showing *Clear Eye* and *Pink Progression* and the latter *Dick*, a blue of odd combinations.

There was quite a display of new

seedlings but many were little above ordinary. The prize winners were very fine and there were a few over which one would hesitate and almost give the prize over those which got it. The white which took first prize was an enormous bloom although some of the first flowers had wilted. The second was a quite deep yellow with many blooms open at once. Two whites and a pink were close rivals for second place. In the amateur class Eugene Fischer was given a certificate for a white seedling, *Henry C. Goehl*.

An interesting exhibit was that of the Metzner Floral Co. of California, who sent a box of flowers which arrived the second day. They were of course bloomed pretty near to the tips but fourteen spikes were selected that showed very well the characters of the flowers borne on them. But as these were tip flowers which probably had lost much of the original color it would be unfair to make any comparisons. The exhibit was decidedly interesting as showing the possibilities of shipping long distances.

FRANK S. MORTON.

SCHEDULE OF PRIZES. OPEN CLASS.

The Massachusetts Horticultural Society.

	1st.	2nd
No. 1—	\$10	\$5—Vase of 25 spikes, White, one variety. First won by Chas. F. Fairbanks, Boston, Mass., with <i>Europa</i> . Second won by Jacob Thomann & Sons, Rochester, N. Y., with <i>Rochester White</i> .
No. 2—	10	5—Vase of 25 spikes, Red, one variety. First won by Chas. F. Fairbanks, Boston, Mass., with <i>Red Emperor</i> . Second won by Helen A. Reardon with <i>Liebesfeuer</i> .
No. 3—	10	5—Vase of 25 spikes, Crimson, one variety. First won by John Lewis Childs, Flowerfield, L. I., N. Y., with <i>Rich Red</i> . Second won by C. W. Brown & Son, Ashland, Mass., with Mrs. A. W. Clifford.
No. 4—	10	5—Vase of 25 spikes, Pink, one variety. First won by T. A. Havemeyer with <i>Panama</i> . Second won by C. F. Fairbanks with <i>Panama</i> .
No. 5—	10	5—Vase of 25 spikes, Yellow, one variety. First won by John Lewis Childs with <i>Sulphur King</i> . Second won by S. E. Spencer, Woburn, Mass., with <i>Schwaben</i> .
No. 6—	10	5—Vase of 25 spikes, any other color, one variety. First won by T. A. Havemeyer with <i>Muriel</i> . Second won by C. F. Fairbanks with <i>Mary Fennell</i> .
No. 7—	10	5—Vase of 25 spikes, any Lemoinei Hybrids. First won by T. A. Havemeyer, with <i>Mme. Mounet Sully</i> . Second won by John Lewis Childs with <i>Baron Hulot</i> .

- 1st 2nd
- No. 8— 10 5—Vase of 25 spikes, any *Primulinus* Hybrids. First won by C. F. Fairbanks. Second won by C. W. Brown & Son.
- No. 9— 50 25—Largest and best collection of named varieties, one spike of each. First won by John Lewis Childs. Second won by C. F. Fairbanks.
- No. 10— 20 10—Collection of 50 named varieties, one spike of each. First won by T. A. Havemeyer. Second won by John Lewis Childs.
- No. 11— 4 2—Vase of 6 spikes, White, one variety. First won by T. A. Havemeyer with *Europa*. Second, won by Jelle Roos, Milton, Mass., with *Europa*.
- No. 12— 4 2—Vase of 6 spikes, Red, one variety. First won by T. A. Havemeyer with *Red Emperor*. Second won by John Zeestraten with *Electric*.
- No. 13—\$ 4 \$ 2—Vase of 6 spikes, Crimson one variety. First won by John Lewis Childs with *George Paul*. Second won by Jelle Roos with *Czar Peter*.
- No. 14— 4 2—Vase of 6 spikes, Pink, one variety. First won by John Zeestraten with *Panama*. Second won by H. E. Meader, Dover, N. H., with *Myrtle*.
- No. 15— 4 2—Vase of six spikes, Yellow, one variety. First won by E. M. Smith, East Hartford, Conn., with *Schwaben*. Second won by C. F. Fairbanks with *Schwaben*.
- No. 16— 4 2—Vase of 6 spikes, any other color, one variety. First won by T. A. Havemeyer with *Loveliness*. Second won by C. F. Fairbanks with *Julia M. Fairbanks*.
- No. 17— 4 2—Vase of six spikes, any *Lemoinei* Hybrid. First won by H. E. Meader with *Heliotrope*. Second won by T. A. Havemeyer with *Leon Duval*.
- No. 18— 4 2—Vase of 6 spikes, any *Primulinus* Hybrid. First won by C. W. Brown & Son. Second won by John Lewis Childs with *Concolor*.
- No. 19— 2 1—Vase of 3 spikes, White, one variety. First won by Thos. Cogger with *Europa*. Second won by Madison Cooper with *Mrs. L. Merton Gage*.
- No. 20— 2 1—Vase of 3 spikes, Red, one variety. First won by C. F. Fairbanks. Second, won by E. M. Smith.
- No. 21— 2 1—Vase of 3 spikes, Crimson, one variety. First won by E. M. Smith. Second won by Jelle Roos with *Rajah*.
- No. 22— 2 1—Vase of 3 spikes, Yellow, one variety. First won by Madison Cooper with *Yellow Bird*. Second won by E. M. Smith.
- No. 23— 2 1—Vase of 3 spikes, any other color, one variety. First won by John Lewis Childs. Second won by E. M. Smith with *Myrtle*.
- No. 24— 6 3—Twelve vases, 12 named varieties, one spike each. First won by Irithorpe Farm. Second won by H. E. Meader.

- 1st 2nd
- No. 25— 10 5—Twenty-five spikes, artistically arranged, receptacle to be furnished by the exhibitor. First won by Jacob Thomann & Sons, Rochester, N. Y. Second won by Eugene Fischer.
- Charles F. Fairbanks, Boston, Mass.,—
Special Prizes.
- No. 27—Best seedling *Gladiolus*, one spike, 1st \$25, won by John Lewis Childs with *Seedling No. 3*. 2nd, \$10, won by T. A. Havemeyer, with yellow seedling.
- W. Atlee Burpee & Co., Philadelphia, Pa.
- No. 29—\$10—Best collection 10 varieties, 6 spikes each. Won by Jelle Roos, Milton, Mass.
- G. D. Black, Independence, Iowa.
- No. 30—First, 25 bulbs *Hiawatha*, won by S. E. Spencer, Woburn, Mass.; second, 25 bulbs *Scarlet Feather*, won by E. M. Smith, East Hartford, Conn. Best 12 spikes *Golden King*.
- H. E. Meader, Dover, N. H.
- No. 31—Cut glass vase, value \$5, best new yellow *Primulinus* Hybrid seedling, purity of color and size to count. Won by C. W. Brown & Son, Ashland, Mass.
- Fottler, Fiske, Rawson Co., Boston, Mass.
- No. 33—First, \$7, won by E. M. Smith, E. Hartford, Conn.; second, \$5, won by H. E. Meader, Dover, N. H.; third, \$3, won by Charles F. Fairbanks, Boston, Mass. Best 5 varieties, 3 spikes each

A. E. Kunderd, Goshen, Ind.

No. 34—First, Gold Medal, won by Clark W. Brown & Son, Ashland, Mass.; second, Silver Medal; third, Bronze Medal. Best collection Kunderd's varieties.

Hitchings & Co., Elizabeth, N. J.

No. 35—A Silver Cup, value \$10—For the most artistically arranged basket or hamper of blooms—not more than 25 spikes. Won by Jacob Thomann & Sons, Rochester, N. Y.

A. H. Austin Co., Wayland, Ohio.

No. 36—\$5 for best 6 spikes of mauve color. One variety. Purity of color and size of flowers to count. Won by Madison Cooper, Calcium, N. Y., with *Herada*.

No. 37—25 bulbs *Herada* for best 6 spikes *Rose Wells*. Won by John Lewis Childs, Flowerfield, L. I., N. Y.

P. Hopman & Sons, Hillegom, Holland.

No. 38—\$10 First, \$5 Second—Best 25 spikes *Pink Perfection*. Won by S. E. Spencer, Woburn, Mass.

CLASS B.

AMATEURS WHO GROW OVER 1,000 BULBS.

Massachusetts Horticultural Society.

No. 44—First, \$5, won by Madison Cooper, Calcium, N. Y., with *Loveliness*; second, \$3, won by L. M. Fuller, Rock, Mass. One vase, ten spikes one variety.

Munsell & Harvey, Ashtabula, Ohio.

No. 45—25 bulbs *Hazel Harvey* for 6 spikes best Red variety. Won by Madison Cooper, Calcium, N. Y., with *Mrs. A. W. Clifford*.

[Concluded on page 130.]

MRS. AUSTIN'S TALKS.

HARVEST SEASON.

It really doesn't seem harvest time yet but

"September turns the green leaves brown,
October winds will shake them down"

and the digging of Gladiolus bulblet grown stock is well under way. We are trying to keep step with Father Time by taking them by the fore tops and pulling them from the ground, having, of course, previously loosened them underneath. Beginning early while the bulbs are still unripe the tops do not break off and leave the bulbs



in the ground, which on account of their small size, makes them difficult to gather quickly, and although the little pear-shaped bulbs look white they will gradually turn brown and ripen in storage.

It is still the harvest of cut blooms from Gladiolus bulbs that were planted a trifle late or from the naturally late flowering varieties.

It is also the harvest time for pæony roots, the best time for dividing and re-setting them. We are looking for the Pæony Man to come any time now. He visited the field in June and chose to come for the roots himself, thinking they were too precious to be shipped. He had keen eyes and his complexion was ruddy and clear, but crowned with snow white hair. Was he young or was he old? Ah, the flowers would tell us, and as he walked briskly up and down the rows vainly trying to make his selections, the secret came out. He was one of those fortunate ones

whom it matters not how old in years, one ever young in heart. Standing in the center of the field he exclaimed, "Bless'em, how I love'em, I'd like to have them all. I want the best one in the field to head my list," and as he saw one of the grand new "Brand Seedlings," he said, "Here it is, this one will head my list." Then away over the plot a second time, "Yes, it's this one." Away again and back. "This is my first choice." And we jokingly labeled it "This One." It was a large loose flower borne on tall stiff stems, a deep maroon shaded with the velvet black of a starless night. No wonder the originator named it "Midnight," and yet it has the sunrise hidden in its heart, and when blooming the first time after being transplanted it shows its cluster of golden stamens in the center.

It would require several visits to see the different varieties as each has its own season, and the selecting was finally left with us. We are often requested to make up the collections, choosing the rose, bomb, crown, semi-double, anemone, etc., types, in various colors and for continuous blooming, and a few descriptions may be of interest:

Umbellata Rosea, usually spoken of as the earliest good pæony, is a most desirable variety. A row in our plot of one year roots blooming for the first time presented a striking appearance. Standing as straight as soldiers, as the blooms opened the large guard petals of violet rose were cup like and when expanded became plate shaped heaped high with amber white petals.

Edulis Superba, a bright mauve pink, and *Festiva Maxima*, large flower with pure white center, prominently dotted crimson, are both early and usually in bloom for Decoration Day use. *Madame De Verneville* coming into bloom as *Festiva Maxima* fades, opens blush center and carmine flecks, bomb shape a beautiful flower.

Couronne D' Or, large, flat, pure white with a ring of yellow stamens around a tuft of center petals. A splendid one in every respect. This follows *Madame De Verneville* in blooming.

Triomphe De L' Exposition De Lille, a rather expensive one to advertise as far as printer's ink is concerned, but it makes up for its long name in self advertising, for once seen it is never forgotten. We allowed a plot of one year divisions to bloom and this gave the best and largest blooms among many varieties planted at the same time. Pale pink with guard petals fading to nearly white. Blooms in mid-season.

Felix Crousse, the American beauty of pæonies, being the same brilliant red as the rose of that name. A grand globular flower, beautiful in contrast with the lighter colored varieties.

Alexander Dumas is often spoken of as the variegated one, it being a bright pink interspersed with salmon, white and chamois. One of the greatest bloomers.

Gen. Bertrand is a beautiful medium light pink with the center petals daintily tipped with silver.

A stranger walked straight through the field to the rows of *Duc De Wellington* and pointing, asked the name. When told he said, "I knew it was an aristocrat. It is certainly no common flower." And it is one to attract special attention with its bomb type blooms, white guards and sulphur center.

Achille, a tall straight free blooming variety of a delicate shell pink, fading to lilac-white. The leaves of this variety are crinkled so as to be noticeable.

Madame Emile Galle is one of the most delicate in color, being a deep lilac-white, changing to milk-white in center.

Monsieur Jules Elie has a compact very high crown of pale lilac-rose with a collar somewhat lighter and shaded to amber-yellow.

While the above list covers only a few varieties, they are all of good types, pleasing colors and delightful fragrance, and being early, mid-season, and late, their season of bloom is well prolonged.

MRS. A. H. AUSTIN.

Delphiniums.

Few plants contribute so much to the beauty of the garden as these five plants of the Crowfoot Order. There are in cultivation many species both annual and perennial, but the most important are the tall hybrid perennials. They are valuable for their wonderful range of lovely color and great variety in height, from one to ten feet. The colors range from almost scarlet to pure white, from the palest lavender up through every shade of blue to deep indigo; and for the variety and size of their individual blooms, some of which are single, some semi-double and some perfectly double, and all set on spikes ranging from one to six feet in height. About a dozen species have given rise to the cultivated forms.

The combinations in which they can be placed are numerous. They may be used in the mixed border, in masses or groups, in one or several colors, or associated with flowering plants or shrubs. Perennial Larkspurs thrive in almost any situa-

tion or soil; they are easily increased and are quite hardy. A deep friable loam, enriched with decayed manure, is a good soil for them, but they will grow in a hot sandy soil if it be heavily manured and watered. Every three or four years they should be lifted, divided and replanted, and this is best done in Spring, just as they are starting into growth. They may be divided in Summer after flowering; if this is done, cut down the plants before they produce seed, let them remain a week or ten days until they start afresh; then carefully divide and replant them, shading and watering until they are established. Late autumn division is not advisable. Delphiniums can be made to bloom for several months by continually cutting off the spikes after they have done flowering. If the central spike be removed the side shoots will flower and by thus cutting off the old flowers before they can form the base and keep up a succession of bloom. Another plan is to let the shoots remain intact until all have nearly done flowering, and then to cut the entire plant to the ground, when in about three weeks there will be fresh bloom. In this case, however, to keep the plants from becoming exhausted they must have a heavy dressing of manure, or applications of fluid manure. Bone-meal applied in Spring and lightly forked into the soil is beneficial. Top dressings of manure keep the soil moist and cool, give the plants a healthier growth, increase the number and improve the quality of the flowers.—W. SAVILLE in *Southern Florist*.

By referring to the long list of prizes which were offered in Class C. as shown on page 86 of the June number and also to the fact that only one exhibitor entered in this class as shown by the list of winners on page 131 of the present issue, it may be understood that the new classification of the small amateurs as adopted for the Boston show was pretty much of a failure. Some changes are certainly necessary, but just what these should be is difficult to determine. We would be glad to have suggestions from any interested exhibitor.

Gladiolus Brechleyensis, illustrated on our front cover page and described on page 131, has a very straight flower spike. The photograph is from shortened spikes to show the form of the flower and hardly does justice to the variety. Dark varieties are always difficult to photograph successfully, hence *Brechleyensis* is hard to represent on paper.

FOR BOTH AMATEUR AND PROFESSIONAL GROWERS OF THE GLADIOLUS
PUBLISHED MONTHLY ON THE FIRST OF THE MONTH BY
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Special favors to none, and a square deal to all.

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Growers are invited to contribute articles or notes over their own signatures, but the Editor reserves the right to reject anything which in his judgment is not conducive to the general welfare of the business.

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Vol. III.

September, 1916

No. 9

Judgment on Flowers

Should Not Be Hasty.

We have often pondered over the difficulties surrounding the placing of a proper value on any particular variety of Gladioli as compared with other varieties, and we believe that such difficulties are not properly appreciated even by the most experienced growers. Take, for instance, a man who is growing seedlings—perhaps his own "creations"—he may get an extraordinarily fine result from a variety owing to extraordinary weather conditions and cultural conditions. He judges this variety to be an extra good one and records it accordingly. The next year he may be distinctly disappointed and it is possible that never again will this particular variety show the superior characteristics which influenced him to give it a high place in his judgment. The same general principles apply to a grower who undertakes to judge a new variety from one year's experience with it. Perhaps the corms he secured were exceptionally good and they gave him fine results and he gives the new variety a high place. Next year his results are poor or indifferent and he is proportionately disappointed.

The burden of this little article is to warn growers, both large and small, that the com-

parative judging of varieties is a very difficult thing and can only be done after some years of comparative growing of the different varieties under the same cultural conditions. A grower to closely judge different varieties should for most perfect comparison have grown them from bulbets of his own raising.

MADISON COOPER.

Amateur or Professional?

The New Haven County (Conn.) Horticultural Society has apparently wrestled with the problem of what constitutes an amateur and their definition is given as follows:

"By the word 'amateur' is understood a person who maintains a garden with a view to his or her own use and enjoyment and not for the purpose of making a profit or gaining a livelihood. The fact of their disposing of surplus stock for money does not change them into professional gardeners, unless the maintenance of the garden is intended to return to them an annual profit. No person can compete in the amateur classes who permanently employs a trained florist, gardener, or nurseryman, or who is employed as such. Any objection raised to the rightful qualification of an exhibitor shall be dealt with by the arbitration committee. All protests lodged with them shall be judged according to their merits and their decision shall be final."

It will be noted that a part of their definition relates especially to our suggestion in a recent issue that no person employing a trained florist, gardener or nurseryman, or who is employed as such, should be allowed to compete in the

amateur class. It would seem that a man who is his own gardener and providing he is really a private gardener and not in the business of supplying the market is a real amateur and he will doubtless be classed as such in future. Whether he sells some of his product or not will not interfere with his amateur status.

Cold Storage of Cut Flowers for Exhibition.

In 1915 there were sent to the editor six Gladiolus corms which he planted and from which good bloom was secured last year. These six corms were planted in the spring of 1916 and from them six spikes of bloom were exhibited at the Boston Show of the American Gladiolus Society in August, taking first premium. It is not at all likely that this accomplishment will be duplicated soon, if ever, and it would be impossible in the above mentioned case except for the application of refrigeration to the problem. The first three spikes were in a cold storage room from a week to ten days in advance of the cutting of the last three. Otherwise, it would have been almost impossible to exhibit six spikes from six corms, and have them in show condition. Thus refrigeration makes possible a result that could not be obtained otherwise.

There are many practical points appearing in THE MODERN GLADIOLUS GROWER from month to month and those who are in the business could, we are sure, add many things which they overlook or consider well known in general. Take, for instance, the cutting of Gladioli for market: There are some varieties that can be safely cut when the buds are quite "tight" while other varieties must have one bloom pretty well open in order to be sure that the bloom will develop properly. *Lily Lehmann* is a variety in this class. Are there not other growers who can suggest still other varieties? Also, cannot some of our friends who are making a business of shipping cut flowers to market, tell us what varieties are safely cut in the bud?

American Gladiolus Society.

[Continued from page 126.]

Willis E. Fryer, Mantorville, Minn.

No. 46—First, 25 bulbs; second, 12 bulbs, of Mrs. W. E. Fryer, for 6 best spikes of that variety. (Disqualified.)

American Gladiolus Society.

No. 49—Silver Medal, First, won by Charles F. Fairbanks, Boston, Mass. Bronze Medal, Second, won by Madison Cooper, Calcium, N.Y. Best exhibit of at least 15 varieties, 3 spikes each, correctly named.

CLASS C.

AMATEURS WHO GROW LESS THAN
1,000 BULBS.

Sunnyside Gladiolus Gardens, Natick, Mass.

No. 61—First, \$5, won by Mrs. E. R. Pierce, Wellesley Farms, Mass. Second, \$3; third, \$2—best 6 spikes Mrs. F. Pendleton.

T. A. Havemeyer, New York.

No. 65—Best 3 spikes any Pink variety, \$3, first; \$2 second. (Disqualified.)

No. 68—Best 3 spikes any other color, \$3, first, won by Mrs. E. R. Pierce, Wellesley Farms, Mass. with *Florence*; \$2, second. Raised by exhibitor.

THE MODERN GLADIOLUS GROWER, Calcium, N.Y.

No. 85—First prize, Silver Trophy Cup valued at \$20, won by Mrs. E. R. Pierce, Wellesley Farms, Mass.; second prize, a life subscription to THE MODERN GLADIOLUS GROWER; third prize, a five year subscription to THE MODERN GLADIOLUS GROWER; fourth prize, a three year subscription to THE MODERN GLADIOLUS GROWER—for the best 6 spikes of Gladiolus bloom, any color or colors. No preference given to named varieties.

The Garden Magazine, Garden City, N.Y.

No. 87—The Garden Magazine Achievement Medal to the winner of the most first prizes in Class C. Won by Mrs. E. R. Pierce, Wellesley Farms, Mass.

Gold Medal: C. F. Fairbanks, for advancement in the cultivation and exhibition of the Gladiolus. Honorable Mention: John Lewis Childs, Gladiolus *Evelyn Kirtland*; C. W. Brown & Son, vase of Gladiolus *Eraline*.

Vote of Thanks: Blue Hill Nurseries, Gladiolus primulinus hybrids; R. J. Farquhar & Co., evergreen decorative plants.

Gratuities to Brookland Gardens, Thomas Cogger, L. Merton Gage, C. W. Brown and Raymond W. Swett for display of Gladiolus; J. K. Alexander for display of dahlias, Blue Hill Nurseries for hardy herbaceous flowers, Mrs. E. M. Gill for hardy flowers, T. C. Thurlow's Sons, phloxes.

Certificate to Eugene N. Fischer for Lemoinei seedling *Henry C. Gochl*, white flushed pink, with carmine blotch.

Those who are not growing *Primulinus* Hybrids should add a few to their collection for another year. The beauties of coloring and shades are unsurpassed and the form of the flower and spike is dainty and artistic.

WAYSIDE RAMBLINGS.

FLY OR BEETLE DAMAGE TO GLADIOLUS FOLIAGE.

TO THE EDITOR:—

There are several Gladiolus enthusiasts in this city and all are having more or less of their flowers ruined by some kind of a fly or beetle. It has a hard back, something like a beetle and is about the size of the ordinary black fly which infests dahlias. Some one says that it looks like a cucumber or watermelon bug. It is black and green and flies quickly from one flower to another as soon as any spray touches it. I have used Black Leaf Forty and Bordeaux Mixture, but have really no idea what is best to use.

One grower here who has one of the truly beautiful gardens of this city is growing about 1000 Gladioli. He tells me that he has never had this fly on these flowers before and has no idea what to do for it. Tobacco seems to have no effect.

A. C.

We have never heard of so serious a destruction of this kind by chewing insects and would be glad to hear from those who can throw any light on the subject.—Editor.

PRONUNCIATION.

TO THE EDITOR:—

Commenting on the remarks of Clark W. Brown in the July number: Have examined the pronunciation of Gladiolus in the latest edition of the Standard Dictionary, I find two words given, both spelled the same. The first is pronounced as he states, and has the following definition: A plant of the Genus Gladiolus. The second word has the pronunciation Gla-di'-o-lus, and that only, defined as follows: A large Old World Genus of plants of the iris family, with fleshy bulb, long narrow, sword-shaped leaves, and spikes of very handsome, variously-colored flowers. The only pronunciation given in the People's Cyclopaedia is with the accent on the second syllable.

R. E. BOOMHOWER.

BEETLES INJURING GLADIOLUS FOLIAGE.

TO THE EDITOR:—

There are two beetles injuring buds and blooms. One is a kind of gray in color, with two lighter spots on wing covers. The wing covers are not of the hard type. The beetle is about a quarter of an inch

in length, dodges from the hand, and if too hard pushed jumps off and flies to a new place. I have noticed this same beetle on the dahlias which are planted parallel to the Gladioli and next them. Perhaps I should add that this beetle is fairly wide for its length.

The other is a little longer and not as wide, width continues about the same throughout. Color is dark brown above and red below, or perhaps I should say a reddish brown, length 5 16", width about 3 32". Antennae about same length as rest of beetle and having three joints. Three legs on a side. Head reddish brown, with just back of it a yellowish section on the top of which are two black dots.

CARL F. GLICK.

Suggestions regarding the foregoing or experience or definite information of any kind will be appreciated by a number of our readers. The hot weather of July seems to have resulted in magnified troubles this year which are not common under usual growing conditions.—Editor.

Gladiolus—*Brenchleyensis*.

We are in doubt as to who originated *Brenchleyensis*, but it was introduced by the father of Henry Youell, present secretary of the American Gladiolus Society and was named for Mr. Youell's home town, Brenchley, England.

While *Brenchleyensis* may be easily criticised, yet it is one of the distinctive things in the Gladiolus world and worthy of a place in any garden. It has a straight spike of vivid vermilion-scarlet blooms with markings of golden-yellow in the throat. The flowers are of medium size, but many are open at one time, in fact, practically all of them on a spike, and they produce a very brilliant effect. This variety is especially useful for the garden but valuable also as a cut flower for strong contrasting. It is one of the oldest hybrids and one of the most popular and a very vigorous grower.

Considerable trouble has been reported this season of damage from insects, beetles, etc. Several correspondents have written asking for assistance. Such inquiries we are able to refer to entomologists of the state or the U. S. Department of Agriculture. They always want a specimen of the insect. Such may be sent in a small vial and identification is usually possible. When the identity of the insect is determined, remedy for its extermination or control may be suggested.

The Hybrids of *Gladiolus Primulinus*.

[From *The Gardeners' Chronicle*, England.]

GLADIOLUS *Primulinus* is now a well-known species. It was described by Baker in 1890, and introduced into cultivation about the beginning of the present century. The species was figured in the *Botanical Magazine* in 1906 (tab. 8080), and in *The Gardeners' Chronicle* in 1904, part II., p. 191. It is, like most of the species, a native of South Africa, and in its typical form a slender plant 2-3 feet high, bearing half a dozen small, hooded flowers of the purest lemon color. It is the only *Gladiolus* whose flowers are entirely free from any red trace, and this is its chief merit from the gardener's point of view. This point does not seem to have been fully appreciated at first, at any rate in France, for it was only about ten years ago that Monsieur F. Cayeux made the first crosses in order to obtain hybrids of a pure yellow color. Having used as a second parent such yellow varieties as *Safrano*, he obtained some very fine and delicately-colored varieties which were shown at one of the meetings of the *Société Nationale d'Horticulture de France*, and were much appreciated.

A couple of years later, Messrs. Vilmorin-Andrieux and Co. began to cross the species with some of their varieties of *Gandavensis*, some selected varieties of *Nanceianus*, and others. The results of these crosses were exceedingly good, the flowers being much larger than in the typical *G. Primulinus*, and the colors varied and delicate. Since then further crosses and rigid selection have led to the formation of a strain altogether different from the others, of special value for cutting purposes, which growers are just beginning to appreciate. Large displays of the hybrid *G. Primulinus* were made by Messrs. Vilmorin-Andrieux et Cie, at the Ghent International Exhibition in 1913, and at the Show of the *Gladiolus Society*, at the Drill Hall, in July last, (1914) where they won the first prize.

Seen in a mass and at a distance, the colors of these new *Gladioli* are much lighter than those of any other strain, and the yellow is very dominant. Purple and violet blooms are very scarce, especially if particular care has been taken in the selection of the seed parent. On a closer inspection one finds that the stems are very thin, and about three feet in length; the flowers are set far apart upon the stem, are few in number, and open only three or four at the same time. The

blooms are placed one above the other, instead of forming two rows, as in *Gandavensis*. The petals are of very unequal size and shape, the three inferior ones being much shorter than the upper and much reflexed. The two laterals are rather large, spreading sideways, something like the wings of a bird, after the manner of pure *Nanceianus*. The upper petal is very large, and bent forward so as to more or less hide the throat. In the various colors, the yellow can always be detected and gives, when mixed with red, a very rich gradation, running from pale sulphur to the brightest orange or flame color. If the blue pigment is present, we may obtain lilac or delicate mauve; but the brightest colors are pure yellow, salmon, apricot and orange, which are rare in other *Gladioli*. The spots upon the under petals, when present at all, take the form of streaks or dots upon a yellowish ground.

Being half-bred from garden varieties, which sport to a great extent, the hybrid *Primulinus* produces in the second generation some plants which are stronger and carry larger, more opened, and more deeply colored blooms. These one might feel inclined to consider better than the smaller forms, and to select the bulbs; but such selection would result in the loss of the special merits of these *Gladioli*, just as in the case of *Lemoinei*, *Nanceianus* and others.

Some growers object to the bending of the upper petal but in point of fact it gives to the flowers a certain air of distinction, and prevents them from looking so flat as other *Gladioli*.

Of course, if we compare these slender flowerscapes to those of the huge *Gandavensis* and *Nanceianus* hybrids, we may consider these latter the finer; especially from the point of view of the effect they will produce when planted in beds or borders.

But pick out a dozen or so of these slender scapes with their small, brightly colored flowers, and put them in an artistic vase, either with *Asparagus* or other foliage; they are far superior for this purpose to any of their allies. This point is of especial value as regards the English market, where flowers are so extensively purchased for indoor decoration. Here they look better and last much longer when cut than in France, on account of the more equable temperature

and more abundant atmospheric moisture. Gladioli are especially lasting flowers, as the buds open freely in water, and keep fresh sometimes for over a week.

It has not been thought worth while up to the present to have named varieties, as in the other strains.*

Being chiefly valuable for cutting purposes, they must be grown in large numbers, so as to have a plentiful supply and they must be sold at reasonable prices. All that has been done is to separate some of them into colors, viz., yellow and orange. With regard to the cultivation of Hybrid Gladiolus Primulinus, it is the same as for other strains. They are perhaps somewhat hardier, more robust, and more free from disease, being newly bred from a wild species. Indeed, so hardy are they that they can withstand the winter in the open ground if covered with manure or other protecting material. Bulbs will flower the same year they are planted if large enough, and the larger they are the more unfailingly will they grow in the spring. However small they may be they will flower the same year but the older and larger bulbs flower much sooner than the smaller ones, and the smallest of all sometimes only at the end of September. Thus, by planting bulbs of different sizes and at various times, one can easily obtain flowers from the beginning of July to October. Being smaller in all their parts, they can be planted much closer together than those of other strains; they seem to be especially fond of moisture in summer time.

The propagation of hybrids of Primulinus is the same as that of the other Gladioli. Bulbs will reproduce true to shape and color of flower, but seed will not; when raised from seeds they will always throw out plants which go back to the hybrid parent, and which must be rogued if the strain is to be kept pure.

Crosses have been tried with many other species than those named; *G. Dracocephalus* and *G. Colvillei* were successfully used at Kew as far back as 1906, and the results are reported in the Kew Bulletin for 1911. But, as far as I know, these crosses did not give such good results as with garden hybrids.

It is probable that hybrid Gladiolus Primulinus will be largely grown in England when it becomes better known. It meets, perhaps more than any form of Gladiolus, the requirements of indoor decoration.—S. MOTTET, Verrieres le Buisson, France.

*This is evidently a paper read before a French Society some time ago and only recently trans-

lated into English. Messrs. Kelway have listed several under names, but they style them "Langprim Hybrid." Their Manual of Horticulture for 1913 contained the names of six: the most popular, perhaps, being *Banshee*.

American Gladiolus Society.

Annual Meeting.

The annual meeting of the society was held in the trustees' room of the Massachusetts Horticultural Society's building in Boston, at 2 p. m., August 12, 1916. About 35 members were present and much interest and enthusiasm was manifested.

President Fairbanks made an interesting address setting forth some suggestions especially as to the need of systematizing the nomenclature of the Gladiolus and the classification of varieties. He also suggested a higher tariff on imported Gladiolus corms to do justice to the American growers.

Secretary Youell read the minutes of the previous meeting and reported on the year's activities. He took occasion to chide the members for their lack of effort to increase the membership. He advocated the printing of an annual report. A healthy financial condition was shown and a balance in the treasury of more than \$200 greater than last year.

Montague Chamberlain made a report to the effect that the new By-laws for classifying exhibitors had not come up to expectations and that a further revision would be necessary. An animated debate resulted, participated in by President Fairbanks, Secretary Youell, Arthur Cowee, E. M. Smith, Montague Chamberlain, L. Merton Gage, Madison Cooper and others, as to the proper status of the amateurs in exhibitions. The question was finally referred to a committee to report on the dividing line between the advanced amateurs, the small amateurs and professionals. A committee was also appointed to report on the arrangements for a quarterly bulletin. New designs for the society medals were shown by President Fairbanks.

At last year's meeting at Newport the officers were elected for two years, but Mr. Fairbanks asked to be released in favor of a more active successor. The members would not entertain the suggestion and a motion to decline the resignation of Mr. Fairbanks was unanimously carried with much enthusiasm.

Harmony and enthusiasm marked the meeting and the optimistic atmosphere promises well for the future of the American Gladiolus Society.

A Chat About the Gladiolus.

BY HARMON W. MARSH, in *Indianapolis News*.

WHEN you hear a man place the accent on the second syllable, don't think he is trying to put on airs with you. He is merely following instructions given in the big book compiled by Mr. N. Webster—look it up.

The Gladiolus is one of the most adaptable flowers we have; will grow in almost any soil, if not too wet. The only thing it always insists on is having plenty of sunshine. What it prefers is a rich sandy loam, but excellent results may be obtained on clay soils also.

It gives you about as much for your money as any flower that grows. Just now you will find the corms very much in evidence in the seedsmen's stores, good mixed corms selling at 1 cent each. Last year the prices were somewhat lower owing to the fact that the United States was about the only outlet for the big crop grown in Holland.

The Gladiolus only blooms once in a season, but that bloom is a joy and lasts for a week. It is one of the best for cut flowers. If the stalk is cut when the first bloom opens and placed in water in the house, every bud will open where it can be admired at close range.

As a rule seedmen only sell first size corms, but this seems to be a mistake. A corm half an inch in diameter will bloom the first season if planted early. Where large and small corms are planted at the same time one gets a succession of bloom, which is more satisfactory than having the blossoms all at about the same time. There is, however, quite a difference in the time required for different varieties to bloom. The extremes will cover a period of thirty days.

There is a fascination about growing Gladioli. One is very apt to start out with some mixed corms, but gets interested and wants to try some of the named varieties. Some of the older varieties, such as *Mrs. Francis King*, *America*, *Augusta*, etc., are about as cheap as good mixture, while some of the newer productions may sell as high as \$2 or \$3 each, and only one to a customer.

The price is also governed by the reproductive power of the variety. Some are very prolific, yielding two or three blooming-sized corms for the one planted and producing a handful of little cormels that will reach blooming size in a couple of seasons if well cared for. If they have

plenty of space, food and cultivation, a few of them may bloom the first year. Other varieties are very shy reproducers and their scarcity keeps the price up.

This habit of rapid increase in some varieties is apt to destroy the balance of a mixture if one keeps replanting year after year from his mixed stock. In a few years he will find one or two varieties predominating. The best growers make up new mixtures each year from excess stocks of named varieties.

In clay soils the corms should be planted five inches deep, and six inches in sandy soil. They should be spaced four to six inches apart in the row. Planting in double or triple rows, with the rows six inches apart gives a good effect; they are easy to care for and the stalks support each other. There is an inclination in some varieties to lop over, and they require a stake or support of some kind.

The plants should be well cultivated to give the best results. Under ordinary conditions, they will do well without extra fertilizer or water after they are planted, though a little of each will help if applied just before blooming.

It may be interesting to know that a man named Kunderd, who has a Gladiolus farm at Goshen, Ind., has achieved fame by originating an entirely new type of Gladiolus, to which his name has been given, *Kunderdi*, and it is well known in all parts of the world where Gladioli are grown. The petals of this new type are ruffled. This feature is the result of many years of scientific breeding.

Cormels should be planted about three inches deep and seem to do best when close together. A good way is to dig a trench three inches deep and six wide, scattering the cormels thickly on the bottom, covering with well pulverized earth and pressing down with the feet. No attention need be paid to which side up they happen to fall, as they have not attained the shape of mature corms.

The loose husks should be pulled off the corms before they are planted, being very careful not to damage the sprouts.

Gladioli may be planted any time from the middle of April to the middle of June in Indiana. If one has a good many corms and they are planted at different times, the blooming season will be considerably prolonged. For early planting pick out the corms that have started

most, saving the backward ones for later planting. They must be kept in a cool, dry place or they will all start.

A great deal of pleasure may be derived from planting Gladiolus seeds, if one has time, patience and room. It takes them a couple of years to bloom and you never can tell what they will be like. Only one out of many thousands of them makes a variety worthy of listing, but it is the only way to get new varieties. The seeds should be planted an inch deep in light soil and kept moist. Beds are generally covered with burlaps or a light mulch until the seedlings appear above ground.

In the fall, before the ground freezes, corms and cormels should be dug, carefully cleaned, the stalks cut off about an inch long, dried in a cool shady place for two or three days and then stored for the winter. Small stocks will keep very well in paper bags, in a cool cellar where it never freezes. Larger stocks should be stored in slat boxes, piled one on the other, to allow a free circulation of air. They should be examined once or twice during the winter to make sure that they are keeping well. The old, dried-up corms, which cling to the bottoms of the new ones, should be pulled off before storing.

Sometimes two or three new corms will form on top of the old one. These and all the cormels clinging to them will produce blooms exactly like the parent corm. Growers take great care in pollenizing in order to get new strains. They pick out varieties possessing certain qualities which they wish to combine and protect the bloom from insects which would carry pollen from other flowers. It has been discovered that nature has a definite law which governs the percentages of those which will resemble each parent and those which will differ.

The popularity of the Gladiolus has grown to such an extent that it now has a little magazine of its own, called THE MODERN GLADIOLUS GROWER. It is published by Madison Cooper at Calcium, N. Y. It makes good reading for anyone who is interested in the flower.

What Constitutes a Desirable Variety?

A writer in the *Florists' Exchange* in reporting the last annual exhibition of the American Gladiolus Society at Boston, after criticising the arrangement of the flowers, offers the suggestion that "the society and the exhibitors should discard many inferior varieties with poor colors and spikes." The suggestion is certainly

a good one, but the difficulty is in carrying it out. Who shall say what constitutes an acceptable variety? This is a matter of ideals entirely, and what would be satisfactory to one person would be rejected by another. It is true that a few varieties are accepted as standards, but even these have their day and pass. Therefore, an attempt to reject inferior varieties would be based on individual ideas unless indeed they might be passed upon by a committee of the society appointed for the purpose and it is doubtful then whether satisfaction would be secured.

In this connection we beg to offer the suggestion that some of the older varieties are fully equal to some of the newer ones and have been discarded simply because they were familiar and well known. Different varieties behave differently under different weather conditions, and, therefore, different seasons give us results which do not harmonize. In other words, certain cultural and weather conditions are necessary to some varieties to give the best results while other varieties perhaps may do well under different conditions. No variety need be condemned, nor need it be praised because of its behavior in one garden during one particular season.

Selling Cut Gladioli.

There seems to be an increasing demand for information as to how best to market the cut blooms of Gladioli, and some of our amateur friends, who are yet growing on a comparatively small scale, seem to think that they have sufficient bloom to find a market for. In this connection it may be suggested that unless a person can ship 25 to 50 spikes per day for several weeks, that it is hardly worth while to try to market them, as it is unlikely that any florist or wholesale house would care to bother with a less quantity. It is possible, however, that hotels, restaurants or even private houses might take as small a quantity as half a dozen to a dozen but this, of course, would mean working up the business locally. Let us hear from those who can throw light on this subject.

H. E. Meader, Gladiolus Hybridist DOVER, N. H.

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FOR BOTH AMATEURS AND PROFESSIONALS.
Published Monthly by Madison Cooper, Calcium, New York.

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OCTOBER, 1916

No. 10

GLADIOLUS—

PINK BEAUTY.

Originated in Holland and very generally distributed and grown for the earliest cut flowers. Planted early in April it should be in full bloom in June.

The spike is slender and of medium height and produces a large

number of medium size flowers open at one time.

The color is a shade of deep rose and it has a deep crimson blotch in the throat.

The illustration here shown was made from a bulblet grown spike and is small and does not do full justice to the variety.

(See also page 142.)



The Gladiolus Manual.

BY W. W. WILMORE, JR.

CHAPTER XV.

Forcing Gladioli.

FORCING Gladioli is perhaps the latest enterprise in American floriculture. We have grown them in our gardens for centuries but it is the last few years that have brought them to our notice as a winter flower. Its comparative ease of culture has made it possible for many inexperienced growers to flower it under glass. Some have been very successful while others have not been so successful on account of the lack of knowledge. To make it more a commercial flower during the winter months the writer will give the best of his knowledge in this chapter as he has been a close observer on this subject for some time.

Most of the mistakes and misfortunes in the forcing of Gladioli are caused by not planting the proper corms and in the proper place. It is as essential to this crop as it would be to a crop of roses or carnations that they be in a place that is light, airy and even in temperature. Soil conditions also are of vital importance. It has become a habit with many growers to fill the odd corners in the greenhouse with Gladioli. Of course we get results most of the time but when we are disappointed, as is often the case, we wish to blame either the man who sold us the corms or declare that the crop cannot be depended upon. We would not think of filling our odd corners with carnations or roses. Therefore, we should congratulate ourselves when a crop of Gladioli comes to maturity in good shape under these conditions.

They should be grown separately in beds planted five to six inches apart each way. I prefer solid benches although I have known of some very good results to come from stock planted on raised benches.

Soil should be well prepared and not soil discarded after another crop has taken the greater part of the food from it, with ordinary virgin soil such as is used by all growers in refilling the benches, little, if any, fertilizer is necessary at the time of planting. When using only well rotted manures only thin coats of commercial fertilizers should be applied. It is best to use liquid fertilizers, applying same just before the crop begins

to bud. One application each week would be ample. If foliage is inclined to be noticeably light in color or take on a sickly appearance, all applications of fertilizers should be abandoned. Heavy waterings will also tend to cause this result.

Soil should be stirred occasionally and always kept in a moist condition, water thoroughly and repeat only when the top soil takes on a dry appearance.

The crop should be grown in a temperature of not less than 45°F. during the night and not more than 60°F. during the day. They are best at an even temperature of 50° to 55°, at this temperature they bloom quicker, flower larger and retain a better foliage.

Corms should be three-quarters as thick as they are wide and stock that has never before been cut for cut flowers. They should be planted to a depth of four inches, right side up and six inches apart for largest size bulbs, five inches for ordinary sizes.

Nearly all varieties of Gladioli can be forced, although there is a varied difference in the length of time required to produce the bloom, most varieties require from 120 to 150 days under normal conditions. They should always be allowed to take their own time as heavy forcing will ruin the crop and rather tends to make the crop later than it does to hurry it.

The above is regarding large-flowered varieties and is not for the culture of Nanus and Colvilli varieties which are so extensively grown through the country. These can be planted much closer (four inches apart) and only three inches deep. The Nanus and Colvilli varieties are very beautiful, the former being composed of a large number of varieties, all showy and of many colors. In cases where Gladioli are wanted to be forced out of season the corms are held over in cold storage and planted at a time when fresh field stock cannot be had.

The Holland growers are using this method for producing flowers at Christmas time. At this time of year Gladioli are seldom seen as the stock taken from the field has not had sufficient time to rest

and start the new growth and bloom at this period.

Instead of planting stock in the spring it is taken to cold storage and kept at a temperature of 38° to 40°F. and planted in August and September. These plantings will bloom during December and January.

This has become a practice with many of the leading cut flower growers in England and Southern France as well as many other countries. It is comparatively new in America but should be practiced extensively in a short period of time.

Stock held in storage will without doubt give better results than fresh stock on account of their delayed growth which they seem to try to make up as fast as they can. The crop comes on more evenly than that of fresh stock, especially the Nanus varieties. These will all bloom at once which is an advantage over stock which strings its crop out for a long period as is many times the case. This also is an advantage as it frees the bench in a shorter time.

I will not attempt to here name any particular varieties suitable for forcing in either the small or large flowering sorts as the breeders of to-day are continually improving the races and should a number of varieties be mentioned it would be but a short time until they would be surpassed by others of superior merit.

The soil conditions should be the same as those given for large-flowered varieties. They can, however, stand a little more fertilizer than the large-flowered sorts but care should be taken not to overdo it.

Planting in cold frames is also another way of blooming the Gladioli out of season. The soil is prepared the same as it would were it the greenhouse bench and the planting is also the same. Fall planting is advisable in both cases of large-flowered and Nanus varieties. Planting should be late so as not to cause too much growth before the sash can be removed in the spring.

They should be well protected from frost by covering with sash and then covering with straw, rush mats or some other convenient material which will exclude the frost. They should be opened as soon as possible in the spring and treated as young plants in a hotbed, giving plenty of ventilation and water, also being careful not to chill or burn as the weather conditions change. They should bloom late in May and early June.

Spring planting can also be made successful if the frames are not allowed to become frozen during the winter so that

they can be worked early in February. They will then bloom early in July just before the early out-door varieties come in.

[Continued next month. Chap. XVI—"Growing for Cut Flowers."]

A. C. Hottes Goes to Ohio.

Alfred C. Hottes, formerly instructor in floriculture in Cornell University, Ithaca, N. Y., has been appointed assistant professor of floriculture at the Ohio State University at Columbus, O. His special work will be the development of courses in floriculture. His appointment to this position will be welcomed by a very large circle of friends and the floriculture interests of the state of Ohio. Ohio is one of the most important floriculture states.

Mr. Hottes graduated from the High School of Ithaca, N. Y., and from Cornell University in 1913, receiving his master's degree in 1914. He is very enthusiastic regarding his new field of work and the possibilities of floriculture in the state of Ohio and takes up his labors with the heartiest recommendations of his former associates. He has already become prominent in floriculture having contributed articles which have been published in *The Journal of Heredity* and in *THE MODERN GLADIOLUS GROWER*. Mr. Hottes is a member of the Nomenclature Committee of the American Gladiolus Society and is a contributor to Bailey's *Encyclopedia of Horticulture*.

Norwegian Booklet on the Gladiolus.

A 32 page booklet of eighteen chapters is to hand, printed in the Norwegian language. This originally appeared as a series of articles by Kristian Prestgard in the Decorah, Iowa, *Postens*. It is a brief discussion of the Gladiolus, its history, cultivation, care, planting, soil requirements, varieties, etc. The American growers are given a chapter and directions for starting a collection, directions for cutting, growing from seed, etc., and it is to be regretted that this little book is only available in the Norwegian language, as we are sure it would prove very useful to many people who could not read it in its present form.

September is too early to dig Gladioli except early planted cormels and planting stock. October is pre-eminently the month for digging in the North Temperate Zone.

Retarding Deterioration of Cut Flowers.*

At a meeting of the Federation of New York Floral Clubs held at Ithaca, N. Y., Mr. Emil C. Volz, as reported in *Florists' Exchange*, New York, has some interesting things to say about the keeping of cut flowers. His remarks are summarized as follows:

1. Physiological and other factors.
2. Refrigeration or the use of low temperatures.

3. Use of chemicals.

Under physiological factors we will group the following important items:

1. Time of cutting blooms.
2. Maturity of blooms at cutting time.
3. Method of removing flower, viz: cutting versus breaking.
4. Proper place to cut stem.
5. Removal of foliage.
6. Fertilizing or feeding before cutting.
7. Fumigation before cutting.

The above rather miscellaneous group is quite self-explanatory to every successful florist and needs little comment. You probably have ideas of your own on this subject, ideas resulting from years of practical experience and contact with the real thing.

We now come to the most important phase of our discussion, namely the use of refrigeration or low temperatures. Beginning with an ordinary cellar, we have a gradual evolution taking place, which leads us to the modern refrigeration plant of the present day. The two intermediate steps may be said to be the use of ice in conjunction with the old-fashioned cellar and the adaptation of the ordinary icebox, which preceded the mechanical device.

What do the results of experiments with refrigeration show? The majority of experiments made in this country indicate that a fairly low temperature (35° to 45°F.) with a rather high humidity will give the best results. A well ventilated cool cellar is given preference by most florists of ordinary means.

M. J. Mercier of France made a series of interesting experiments which proved that an icebox with temperature of 36°F. and a relative humidity of 90% was far superior to a cold cellar with temperature of 41°F. and relative humidity of only 60%. The humidity evidently played a very important role.

The work of M. J. Mercier is partially substantiated by some trials made with

Paperwhite Narcissus at Cornell University. These flowers kept perfectly for a period of two weeks in a storage room of 40° average temperature with constant humidity of 85%. At the end of four weeks the Narcissi were still in fair condition, however, they had lost their odor and bright luster.

Check lots were kept at ordinary living room temperature and only lasted three and five days respectively.

Refrigeration occupies a prominent place with the large commercial firms of to-day. The wholesale grower of Carnations and Roses would be lost without it, as would the grower of Peonies.

The third part of our discussion takes up the use of chemicals as flower preservatives. In 1906-1907 two French scientists, Messrs. Ducomet and Fourton, demonstrated by experiments that many types of flowers will respond to sugar, salt and other chemical solutions if made up in certain proportions. Similar experiments were conducted in 1908 and 1913 at Cornell University under the direction of the Plant Physiology Department. The results did not tally at all with the work done in France; however, different types of flowers were used in conducting the work. This probably will account for some of the differences. That chemicals do have a decided effect in some cases was demonstrated by recent experiments with Chrysanthemums at Iowa State College. Solutions of the salts of sodium, potassium and calcium increased the life of the Chas. Razer variety by four days in comparison with ordinary water treatment.

Having hastily surveyed the past, let us now look the present situation squarely in the face with a view to offering suggestions for future work. The idea of flower preservation primarily is one of arresting or at least slowing up certain processes, sometimes spoken of as "ripening," which naturally take place in plants. Temperature has an important effect upon the rapidity with which these changes take place, hence the florist resorts to refrigeration to preserve his cut flowers. What we need most now along the lines of flower refrigeration is carefully conducted temperature tests with each of the most important commercial flowers. These tests should give not only the proper temperature, but also the correct humidity in each case so that the flower will not only keep in storage, but

* Reprinted from *Cold*, published by Madison Cooper Co., Calcium, N. Y.

"Buy a frame and get your picture free," and under his brush the canvas became

a landscape. He waxed eloquent and convinced many that their gaze should rest on a picture (one of his) the last thing at night and the first thing in the morning.

"Buy a Dutch lunch and fool your friends." The lunch in forms of apples, bologna, sandwiches, etc., all of candy.

"Here are the latest things in trellises and pergolas and, yes, young lady, that's a courting seat just big enough for two."

"This is our special Gladiolus bulb offer, 10 varieties for 50c., a \$1.00 value. All properly labeled and mailed to your address prepaid, Nov. 1st."



Gertrude J. Stanton—Age 4 years.

"Taste our Wiltshire Ham baked in the Echo-Thermo stove." (Perfectly delicious.)

Baking demonstrations were interesting, but one of the trying things was helping to judge the bread in the bread contest. The exhibits in the Flower Show tent interested us most, and a diagram of it may be of interest to others.

Outside, in addition to the nine large tents were probably fifty smaller ones as well as the usual other attractions that go with fairs. At the Open Air Hippodrome, the singing of Miss Marianne Conway with band accompaniment was especially pleasing, and the rich musical tone of her voice was equally noticeable

when, in a little morning chat she said, "I think Neo cleaner is the best for white shoes."

The most beautiful performance was the toe dancing of Prof. Cook's class of children. Beautifully costumed they danced the Highland Fling and other melodies which showed their accomplishments to perfection. The little Cupid, Gertrude J. Stanton, four years old, whose photo appears here, is the youngest toe dancer in Cleveland, and certainly a wonder in her line.

Glad we went to the Exposition and now glad to be home again.

MRS. A. H. AUSTIN.

Gladiolus—*Pink Beauty*.

[Subject of illustration on our front cover page.]

While the illustration on our front cover page this month does not do justice to the variety, *Pink Beauty*, yet we are pleased to give publicity to this variety on account of its many good qualities.

While some growers despise *Pink Beauty* and while we are ready to admit that it cannot be classed as a high grade flower by any means, yet when it is considered that *Pink Beauty* is doubtless the very earliest of any Gladiolus and when we consider further that it is of fair quality and very useful as an early cut flower, we may with consistency recommend *Pink Beauty* for every garden.

Pink Beauty is a sure bloomer and we think there is no doubt but what it is a full week earlier than any other common variety, if indeed, it is not two weeks earlier.

Pink Beauty is a medium size corm and is very prolific of large size cormlets, many of which throw flower spikes the first year.

This variety has been given awards of merit and first class certificates by several different European Societies.

By all means grow a few *Pink Beauty* for its earliness if for no other reason.

When THE MODERN GLADIOLUS GROWER was first undertaken it was thought that it would be difficult to get sufficient matter to keep it going for a period of years. We are now near the end of the third year and the accumulation of good matter on hand is greater than ever before. Our readers need have no fear that THE MODERN GLADIOLUS GROWER is ever likely to be discontinued because of lack of matter to print. Our only lack is subscribers. Send us the names of your friends who may be interested.

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Special favors to none, and a square deal to all.

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Growers are invited to contribute articles or notes over their own signatures, but the Editor reserves the right to reject anything which in his judgment is not conducive to the general welfare of the business.

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Vol. III.

October, 1916

No. 10

The "Freaky" 1916 Growing Season.

The growing season has been quite "freaky" for Gladioli this year as well as for other vegetation. The cold, wet, early season followed by the hot, dry middle season resulted in a forcing of growth which was not conducive to well balanced bloom. Many growers report that such varieties as *Mrs. Francis King*, which ordinarily bloom from very small bulbs, have only given bloom from the larger size. It is also reported that many misshapen flower spikes have resulted and the hot weather and lack of moisture have resulted in complete failures in some cases. Those who are growing Gladioli for the first time this year should not be discouraged and should carefully save their bulbs for another season's growth. Bulbs which have matured in pretty good shape will give a good flower spike next year with average weather conditions.

One of our correspondents writes that he is having trouble with katydids which attack his Gladiolus field in swarms. They injure a large portion of the blooms and he would like suggestions as to a remedy if anyone has had the same trouble and applied a remedy for it.

One of our Western subscribers, who is a clergyman, writes that he has been a florist for over 40 years and tried almost everything for the decoration of churches and that the Gladiolus is a better flower in a way than all others. Certainly the Gladiolus has a range of color and gives a volume of bloom which is applicable to most any purpose, and for church decoration especially where a large mass of bloom is necessary for proportionate decoration, the Gladiolus cannot be surpassed.

Some of our readers may be interested to know how one of our subscribers started making a business of the growing of Gladioli for cut flowers. She was situated 19 miles from a large city and the carrying of great bunches of the cut bloom in her arms on the electric cars to friends in town, brought all the orders she could fill. Here is a novel suggestion from an advertising standpoint. There is a great future for the Gladiolus and there is a great market for cut bloom of same if it is properly displayed and advertised.

The Editor has found in growing the variety known as *The King*, that the variety *Kathryn* received from another grower is identical with it. If others do not agree with this conclusion we hope to hear from them.

We are asked about a variety called "Incontestible." It is described as an extra large flower of creamy white color except two large red, clear-cut blotches on two lower petals. Can anyone tell us who originated it and more about it?

Classifying the Dahlia.

[Copyrighted by *The Garden Magazine.*]

Systematic botanists now prefer another scientific name for the flower, but it pre-eminently deserves the one so commonly given in floricultural literature, *Dahlia variabilis*, the "changeable Dahlia." Probably no other genus of plants has developed in so short a time so many diverse types as mark the present day range of this beautiful fall flower. In the genus we have plants dwarf and plants giant, plants light yellowish green and plants deep metallic bronze, stems stocky and stems slender and leaves coarse as those of cabbage and fine as those of ferns. The widest range, though, is shown in the flowers; for here, starting with the "single" with eight small "petals" or floral rays, we have every gradation in size from the tiny Pompon to the gigantic decorative, and every development in form, extending, on one hand, through the broad-petaled, flat Decorative to the perfect ball of tightly-quilted rays that mark the old "Show" type, and, on the other hand, through the long, gracefully twisted ribbons of the Peony-flowered Dahlia, to the delicacy of the needle-like, interlacing, reversely rolled rays of the most advanced Cactus Dahlia.

*Developing in different countries along somewhat unlike lines, the classification of these types of Dahlia has become very irregular, so that except in England where a National Dahlia Society and the Royal Horticultural Society have done much to secure uniformity, every grower has had a classification scheme of his own, differing slightly or materially from that of his neighbor.

This unfortunate confusion the American Dahlia Society is attempting to correct, for this side of the water, at least; and has presented a tentative classification scheme, which, in its final form, it is hoped Dahlia cataloguers generally will adopt and use, so that we may have a definite idea in mind when we speak of a particular type of Dahlia.

This classification groups Dahlias in nine sections, largely by type of blossom, as follows: (1) *Cactus Dahlias*, with subsections for the true, fluted type and the

Hybrid-cactus or Semicactus type; (2) *Decorative Dahlias*; (3) *Ball-shaped*, Double Dahlias, with subsections for Show type, Hybrid Show, Giant Show or Colossal type, and Pompon type; (4) *Peony-flowered*, or "Art" Dahlias; (5) *Duplex Dahlias*; (6) *Single Dahlias*, both large and small; (7) *Collarette Dahlias*; (8) *Anemone-flowered Dahlias*; and (9) Other sections, defining Miniature or Pompon Cactus, Mignon or Tom Thumb type, Bedding Dahlias, and Cockade, or Zonal, Dahlias.

If classification has been confused, the nomenclature of its varieties is "confusion worse confounded." Names are now not only duplicated, but double duplicated and even worse, frequently for varieties of same type. The same variety may travel under one or more aliases; names are so misspelled as hardly to be recognizable; foreign names are imported bodily with the varieties, or are translated or mistranslated; old varieties are re-named, etc., etc., while accurate descriptions of varieties, based on any known color standard, free from unduly laudatory adjectives and giving a clear picture of the flower, are altogether too rare.

The correction of the errors in names and the writing of exact, non-technical but clear and concise descriptions of the limited number of varieties that are carefully selected as really worthy of continuation, are tasks that can only be accomplished, if at all, by years of careful work.

All varieties thought by any grower to be really worthy of attention should be collected at some central place or places, where they can be carefully studied and compared by a small group of Dahlia lovers, or by scientific students of floriculture, who are interested in the flower as such, not concerned with its dissemination or sale but thoroughly cognizant of all points which make Dahlias worthy of growing or selling, either for decorative beauty or commercial adaptability. Such work the American Dahlia Society, through its Nomenclature Committee, hopes sometime to be able to do; but it can become a possibility only by the hearty coöperation of all Dahlia growers and Dahlia lovers.

F. H. HALL.

We are greatly in need of good photographs of varieties of Gladioli which are well introduced to commerce. A single spike will answer but we prefer two or three spikes in a group as they make a much better illustration. Photographs must be clear to reproduce well. Anyone having such photographs will confer a great favor by sending them in.

WAYSIDE RAMBLINGS.

A LITTLE CONSIDERED VALUE IN SUGGESTIVE CATALOGUE DESCRIPTIONS.

These thoughts have suggested themselves to me by reading the following description of *Gladiolus Mary Fennell*:

"Unusual and attractive. There is no other *Gladiolus* like it. It is beautiful and refined and stately as a Duchess, and will be prized by those who admire the Patricians of the garden."

The impression created by these words causes the flower described to stand out alone, clothes it with an appealing individuality which at once grips the imagination and causes us to see visions and dream dreams. This is the perfection of description and lifts us far above the sordid atmosphere of trade.

Now the usual purpose for which a description is employed is to effect a sale, but the words quoted carry us beyond this; they awaken in the reader's imagination a picture of what the flower really is, the desire to possess follows, and once possession is attained the description becomes a source of pleasure and this pleasure continues until the flower appears and has a real and substantial value and this value would be in no wise discounted if expectations were not realized.

Any suggestive force that impels us to search for the beautiful or the great is uplifting in its tendency; the quest for the ideal carries its own realization.

JOHN LANE.

CROWDED TERMINAL BUDS ON GLADIOLI.

One of our correspondents writes wanting to know why there are sometimes a few buds crowded on the end of the spike only. He asks if this is due to too close planting. He reports a good many in that condition, especially *America*.

We have noticed this trouble ourselves in some cases. Some varieties seem especially prone to it while others are altogether free. Any reader who can offer a suggestion as to the cause will confer a favor on the editor as well as on our correspondent by writing us fully about it.—(Editor.)

BETTER INQUIRY TO GLADIOLI.

I notice an inquiry in the September issue of THE MODERN GLADIOLUS GROWER by Carl F. Glick in regard to beetle injury of Gladioli. The beetle is "The

Tarnished Plant Bug," and is a serious pest on Dahlias. He stings the tender stem right back of bud, sucks the juice out and caused the bud to blast so they have to make new side shoots before blooming and the bug often keeps blasting buds so no flowers appear. It has been an unusually hard season on Dahlias this season. I never knew this beetle to damage the *Gladiolus* as he does not chew but only sucks the juice, but he injures asters and may the *Gladiolus*. I don't know if the fly or beetle "A.C." describes in the September issue is the same one, but presume it is. E. R. MACOMBER.

Newport (R. I.) Mid-summer Flower Show.

The Newport Horticultural Society and the Newport Garden Club, held their third annual show at Hilltop Inn, August 17th, 18th and 19th. Some very meritorious displays were made and Gladioli were well represented.

Among the trade exhibits were the following:

L. Merton Gage, Natick, Mass., showing the variety, *Mrs. Dr. Norton*. He was awarded a Silver Medal. A first class certificate went to H. E. Meader, Dover, N. H., for the variety *Myrtle*; a gratuity of \$5.00 to C. W. Brown & Son for collection of Gladioli.

C. M. Bugholt showed a white seedling *Gladiolus* of great purity which was awarded the society Silver Medal. B. Hammond Tracy put up his usual fine display of Gladioli. F. P. Webber showed *Primulinus Hybrids*.

The above mentioned are *Gladiolus* exhibits only. There were, of course, many other beautiful flowers exhibited, but we mention only those most interesting to our readers.

Along with plenty of vegetables, every farm family should raise plenty of flowers. We should like to see the time come when in every farm home in the South a bunch of flowers in the center of the table will be regarded almost as much a table necessity as butter or sugar. The feeding place of mere animals may rightly serve no purpose except to satisfy the demands of the stomach, but the family dinner table should also reflect one's aspirations for higher things. Let the dinner table be a place for beautiful flowers, and meal-time a time for everything of good-humor and good-fellowship it is possible for all members of the family to bring to it.—*The Progressive Farmer*.

Retarding Deterioration of Cut Flowers.

(Continued from page 140.)

will be able to exist a reasonable length of time in the care of the consumer. In many cases we find complaints arising from this very source. Surely the cut flower trade in America and Europe is extensive enough to warrant these experiments.

As shown before, chemicals, at least in the form of solutions, have been found wanting by the commercial man. No one solution will benefit enough types of flowers to warrant its use on a large scale. Perhaps these difficulties will be remedied in the future.

Of recent years experiments with apples and other fruit demonstrates that carbon dioxide gas is useful in preserving the fruit. If it proves to be a commercial success with fruit, there may be an opportunity of getting good results with cut flowers. The advantage of the method is that it can be used in connection with cold storage and would, therefore, be of value, commercially.

The whole problem then resolves itself into the two main phases: Refrigeration, Chemistry and Plant Physiology. The commercial man is most interested in refrigeration, because it has and will benefit him more than other methods. Therefore, he should be active in helping with the experimental work.

Note by the Editor:

The above is an extremely interesting and valuable contribution to the subject of which it treats and as such is entitled to the careful consideration of those who are interested. As we have had considerable experience in trying to determine the correct humidity for the storage of various perishable goods, it might not be out of place for us to suggest that it is an extremely difficult thing to determine the exact humidity which is the most suitable for the safe keeping of any particular product. Conditions are variable and the state of maturity of the product varies and, therefore, only generalities may be arrived at. It is a pretty safe thing to say, however, that cut flowers will do better in a relative humidity of 85 to 90% than they will in a relative humidity of 60%. The temperature at which they should be held depends some-

what on the length of time they are to be carried in storage and what temperature they are likely to encounter when removed therefrom. The practical features of the problem must be carefully considered in carrying on research or experimental work along this line.

Life History of Gladiolus

Corms Wanted.

Last fall at digging time the Editor noticed some peculiar looking corms mostly from a mixture, but partly from the variety, *America*. These corms were well developed especially as to height and the peculiar part of them was their contour or exterior surface, instead of being smooth and round as most corms are, they were wrinkled and ridged. It was thought at the time that these corms might be mixed in from some other variety, and they were carefully separated and marked for separate planting. They have behaved peculiarly this year, the most of them not blooming but dividing into three, four, five and six corms which are apparently well developed and strong enough to throw a flower spike next year. It is expected to still keep these corms separate for another year's planting and watch developments. The experience is related here hoping that some other grower may have been through it and can throw additional light on the subject. The life history of a Gladiolus corm has been touched upon in past issues of THE MODERN GLADIOLUS GROWER, but we are not satisfied that all the different phases of the subject have been covered. Some growers claim that they have a secret process of rejuvenating "worn out" corms. We presume that their secret process is no secret at all, but may be somewhat along the line of the above stated fact. If cultural conditions are good it is possible that the so-called "worn out" corms can be made useful by forcing them to divide forming new corms which have never bloomed and which will be strong for bloom the following year.

Certainly Gladiolus growers who have been in the business for many years should be able to tell us more about this subject. Comparatively few people are observant, however, and we are not surprised that more definite facts are not known. It seems too bad that new beginners should be obliged to dig out a lot of information which could readily be given by those with longer experience.

Gladiolus Society of Ohio.

Fourth Annual Flower Show.

THE Gladiolus Society of Ohio held its fourth annual flower show at the Hollenden Hotel on August 18th and 19th, and as has been customary in recent years the Cleveland Florists Club co-operated with the society and showed a number of interesting made-up floral pieces.

Owing to the dry weather the display was not as large as last year, but was extra good considering the droughty conditions prevailing in Ohio. Through some misunderstanding as to date of the show several intending exhibitors were not present with exhibits.

Joe Coleman of Lexington, Ohio, captured the Cleveland Florists Club cup for the most meritorious new Gladiolus, and the specimen shown by Mr. Coleman was certainly worthy of it.

J. F. Rychlik, Painesville, Ohio, took six first prizes and one second prize, capturing by far the largest number of awards secured by any one exhibitor.

The Nagirroc Gardens from the Corrigan Estate had a fine display and the variety *Baron J. Hulot* shown by them was the finest we have ever seen.

Munsell & Harvey, of Ashtabula, Ohio, took first prize for the most meritorious display with R. E. Huntington, of Painesville, second.

C. B. Gates, of Wayside Gardens, Mentor, Ohio, had a fine display of selected varieties.

The Cleveland Florists Club were represented by Knoble Bros., The Jones & Russell Co., J. M. Gasser Co., A. M. Albrecht, Paul C. Hahn and Chris. Wilhelmy. They showed table decorations and baskets and made a very fine display through the center of the hall as a fitting complement to the vased Gladioli arranged along the sides:

LIST OF AWARDS:

Class 1.

By The W. Atlee Burpee Co.

Best vase any Red variety. 10 spikes, cash \$5.00.
Won by James F. Rychlik with *War*.

By the Gladiolus Society.

Second Best Vase any Red variety. 10 spikes.
Bronze Medal. Won by James F. Rychlik with *Princes*.

Class 2.

By C. B. Gates.

Best Vase any Pink variety. 10 spikes, Silver

Medal. Won by Guy Bates with *Evelyn Kirtland*. Second Best Vase any Pink variety. 10 spikes. Bronze Medal. Won by Madison Cooper with *Panama*.

Class 3.

By Munsell & Harvey.

Best Vase any White variety. 10 spikes, cash \$5.00. Won by James F. Rychlik with *Glory of Holland*.

By the Gladiolus Society.

Second Best Vase any White variety. 10 spikes. Bronze Medal. Won by Madison Cooper with *Spencer's No. 10*.

Class 4.

By R. E. Huntington.

Best Vase of any Yellow variety. 10 spikes. Silver Medal. Won by James F. Rychlik with *Niagara*.

Second Best Vase any Yellow variety. 10 spikes. Bronze Medal. Won by Madison Cooper with *Schwaben*.

Class 5.

By E. E. Stewart.

Best Vase any other color, 10 spikes. 100 corms *Michigan*. Won by Jas. F. Rychlik with *Apollo*. Second Best Vase any other color. 10 spikes. 100 corms *Black Beauty*. Won by Nagirroc Gardens with *Baron J. Hulot*.

Class 6.

By Charles F. Fairbanks.

Most Meritorious Display, cash \$10.00. Won by Munsell & Harvey. Second, cash \$5.00. Won by Mrs. R. E. Huntington.

Class 7.

By Charles F. Fairbanks.

Best Vase, any variety. 50 spikes, cash \$5.00. Won by Mrs. R. E. Huntington with *Pink Perfection*.

Class 8.

By Charles F. Fairbanks.

Best New Seedling not yet disseminated. 1 or more spikes, cash \$5.00. Won by Joe Coleman.

By James F. Rychlik.

Second Best New Seedling not yet disseminated. 1 or more spikes, cash \$2.00. Won by Joe Coleman.

Class 9.

By The Gladiolus Society.

New Seedling, or other variety of merit, not before shown here, any color, grown by the exhibitor, 6 or more spikes. Certificate of Merit with per cent of rating. Won by Munsell & Harvey.

Class 10.

By Joe Coleman.

Best Collection Seedlings. Silver Cup. (No award.)

By Bidwell & Fobes.

Second Collection Seedlings. Bronze Medal. (No award.)

Class 11.

By Miss Gretchen Zang.

Best Vase, variety *Gretchen Zang*. 6 spikes. Silver Cup, value \$10.00. (No entries.)

Class 12.

By THE MODERN GLADIOLUS GROWER.

Best Vase, any color, 6 spikes, Silver Trophy Cup. Value \$15.00. Won by J. F. Rychlik with *War*. Second, 10 years' subscription MODERN GLADIOLUS GROWER. Won by Bidwell & Fobes with *Rose Wells*. Third, 5 yr. subscription. (No award.) Fourth, 3 yr. subscription. (No award.)

Class 13.

By Willis E. Fryer.

Best Vase, variety *Mrs. W. E. Fryer*, 6 spikes, 25 corms *Mrs. W. E. Fryer*. Won by Bidwell & Fobes.

Best Vase variety *Glory*, 12 spikes, 25 corms *Mrs. W. E. Fryer*. Won by Bidwell & Fobes.

Class 14.

By The Austin Co.

Best Display of the Austin originations, not less than 4 nor more than 6 spikes each, cash \$5.00. (No entries.)

Class 15.

By Harry C. King.

Best Display Primulinus Hybrids, 100 corms *Niagara*. Won by Madison Cooper.

By H. E. Meader.

Second Best Display Primulinus Hybrids, 25 corms. (To be selected by the winner from any two of the following varieties *Europa*, *Pink Perfection*, *Liberty*, *Tiger*.) Won by Nagirroc gardens.

Class 16.

By Matthew Crawford.

Best Vase any Red variety, old or new, 3 spikes, 200 corms *Mrs. F. Pendleton*. Won by James F. Rychlik with *War*.

Class 17.

By Jacob Thomann & Sons.

Best Vase New Seedling, White or Light color, 100 corms *Rochester White*. Won by Munsell & Harvey.

Second Best Vase New Seedling, White or Light color, 50 corms *Rochester White*. (No other entry.)

Class 18.

By the Cleveland Florists Club.

Most Meritorious New Gladiolus, never before shown here, Silver Cup. Won by Joe Coleman.

Basket Displays by Knoble Brothers, by Paul Hahn, A. M. Albrecht, and Ernest B. Wilhelmly were all very good.

Table Decorations also by the Jones-Russell Co., The J. M. Gasser Co. and Knoble Brothers were also very effective and pleasing.

The Gladiolus Society awarded a Silver Medal for merit of display from private gardens to the Nagirroc Gardens.

Plant Diseases.

We are as much at sea on many plant diseases as is the medical fraternity regarding a cure for infant paralysis. One of the most baffling is the hard or dry rot of Gladiolus bulbs. Various experiment stations throughout the country have been working on the problem for years without gaining any light. Some of these have recommended a formalin bath of one part 40% formalin to 14 parts water, bulbs to be soaked eight hours; some state longer.

It was feared a stronger solution or a longer bath would injure the bulbs. This year the writer determined to give this treatment a thorough test. It was tried in various strengths, the strongest solution being one pint of 40% formalin to nine pints of water and the longest immersion in this was 24 hours, one lot of bulbs being but a half-inch in diameter. It was thought the solution might soak nearly through the latter. To be very brief, no bulbs were injured and no check made on the development of the disease, for the mortality in each and every lot was as great as in the case of the untreated lots held for checks. The lots consisted of ordinary garden hybrid Gladioli and also several lots of half-blood primulinus. No effect of the treatment was noted.

A few things were noted of doubtful value. The lowest mortality was in the wettest ends and sides of beds, the highest in the driest parts, though even the latter had an abundance of water. Shade for nearly all the forenoon fell on some beds of each lot and in these parts the disease seemed to gain but little headway. Is it possible a low temperature will tend to lower activity of the disease as is the case with soil bacteria? It was also noticed that in the driest and hottest spots the disease became epidemic the present year, though it is presumed the bulbs were diseased before planting. But the fact is that in these spots a space of several feet square would lose every bulb and the bulbs were of various sorts, some of them named varieties from both foreign and American growers or dealers. The writer wishes to confess he knows no more of measures for control than he has in the past. One lot of bulbs was soaked for eight hours (1915) in a solution of one-third peroxide of hydrogen and two-thirds water. This as a preventive measure on some fine sorts. It was not known they were diseased, however, and none now appear infected. But the bulbs seemed of lowered vitality both that year (1915) and even the present year have not produced as in 1914. This proves nothing, however. As it is believed the disease is constantly developing, it is suggested bulbs be treated as soon as dug, instead of in spring, just before planting. If low temperatures are a deterrent, fall treatment is more necessary in California than elsewhere.—ERNEST BRAUNTON in *Los Angeles Times*.

THE MODERN GLADIOLUS GROWER will be sent to your address for three years at a cost of but \$1.50.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Planting Cormels or Bulblets.

TO THE EDITOR:—

I would very much appreciate an article describing how the big growers plant their cormels. In one place I saw it recommended to sow them in trenches 4 to 6 inches wide, 200 to 400 cormels to the foot. Another grower mentioned the use of a machine or garden drill for the purpose. Would like also to know how they plant their small bulbs or planting stock. P. G.

Answer:—Our personal preference is to plant in a flat-bottomed trench five to six inches wide and, as suggested, at the rate of perhaps 200 to 400 cormels to the foot of row, but if planting valuable varieties we would plant in a single drill and not so thick as it gives room for larger increase. We tried a garden seeder with special cylinder for planting bulblets but it does not put them in as thickly as we would like to have them. The valuable sorts should be handled just about as you would plant garden peas, but perhaps sown a little more thickly and covered two or three inches deep.

Planting stock or small corms are commonly drilled in a single drill, but in our own case, we drill them in a double drill or double row about six inches apart and the double rows about thirty inches apart. The trench for the double row is made with a hand hoe after first opening a trench with a hand garden plow. The bulbs are sown by hand and irregularly, not placed singly, in a drill made with the end of a rake in the bottom of the flat-bottomed trench and covered to a depth of about four inches.

Soil Treatment for Flowers.

What is the best fertilizer to use on a sandy soil in a public place where we wish to grow flowers? Would ashes be good?—Y. Y., Ashtabula Co., O.

Answer:—It will be best to work a good application of rich stable manure into this soil some months in advance of planting. Fifteen tons per acre should give good results. Later, apply one-half to one ton of wood ashes per acre, and shortly before planting use 300 pounds of acid phosphate per acre.

Propagation of Gladioli.

TO THE EDITOR:—

Can you please give us some information in regard to the commercial propagation of Gladioli, both of the blooms and the bulbs? What kind of soil is necessary for their success.

A. K. W., Pa.

Answer:—For the commercial propagation of the Gladiolus in order that the corms may be of good size and not too soft, the fertilizer best used is one usually termed a Potato phosphate, rich in phosphoric acid and potash. Frequent cultivation is also strongly advocated. A medium loam is the preferred soil. Certain Holland firms are raising bulbs cheaply and competing, but the bulbs are thought not to be as clean of disease. Good stock can be grown from cormels or "spawn," planting 2" or 3" deep and cultivating very persistently.—*Florists' Exchange.*

Forcing Gladioli.

TO THE EDITOR:—

What method is used to grow Gladiolus bulbs for forcing bloom? Do they need to be planted earlier than usual to be forced for bloom for the following Easter? May blooms be cut from stock grown for forcing? What size bulbs can be used so as to get first class bloom, variety would all be *America*? F. O. G.

Answer:—Considerable information has appeared on this subject in past issues of THE MODERN GLADIOLUS GROWER, but the article by Mr. Wilmore in this issue is perhaps the most complete.

We would be glad to have further comments on this subject and especially an answer to "F. O. G." as to best size bulbs of *America* for forcing. The subject of forcing Gladioli will come into greater prominence, and we are desirous of securing all the information possible on it.

THE MODERN GLADIOLUS GROWER is nearing the end of its third volume and we believe we are safe in saying that the files of same contain more facts and information regarding the Gladiolus than can be had from any other source. The bound volumes cost but \$1.25 each post-paid and we can furnish back issues of Volume III. to date.

Gladiolus—*The Bride*.

Although October is, perhaps, the best time for planting *The Bride* and other early-flowering Gladioli, corms may yet be planted. For pots a good compost is one of turfy loam, a little leaf-mold and some sand, made rather moist, but not so wet as to cling when pressed in the hand. A 6-inch pot may contain seven corms, and they should be planted about an inch deep and the pots plunged in Cocoanut fibre or ashes out of doors. If indoors they can be put under the stage of the greenhouse, but not near the pipes. If early bloom is needed the pots can be put into a temperature of 50° to 55°. If planted in the open at this season they may be put 4 inches deep with a little sand about the corms.—S. ARNOTT in *Gardening Illustrated*.

Bulbs.

Speaking of lilies, I will say that last fall we set out half a dozen *Candidum* lilies in September. August is the right time, but as they are imported it is a very difficult matter to get them at that time. These lilies make, or should make a fall growth. Mine were set out September 20th, about as soon as they were received. The bulbs were the largest and strongest I had ever had. Growth began almost at once, in fact the roots were already thrusting themselves through the moss in which they had been wrapped, before they were put in the ground. We have a bed for the bulbs of sand two or three inches in depth covered them with the sand, then with good soil, and a fine growth resulted before cold weather came; in fact the green crowns remained green until they were covered with litter for protection. They have survived the winter, and it remains to be seen what they will do.

If the tulips are done blooming, and need re-setting this year, they may be taken from their place, while the tops are green, but do not break the tops off, nor disturb the roots to stop growth. The whole bunch may be put into a shallow trench prepared for them, huddled together, or heeled in, for the further growth and ripening of the bulbs, then when the time comes for re-setting in the fall, they will be together and easily reached, whereas if left to grow in their own bed, possibly with other flowers about or over them, it is a difficult matter to locate them. The Darwin tulip is a very valuable one because it grows on forever with no need for resetting unless it gets too thickly set, when they may be thinned out by

troweling them carefully from their places, while the tops are visible, trenching or heeling them in to finish their growth, and where they can readily be found when wanted for the fall bulb bed. Darwin tulips we set out last fall are the first ones to start this spring; in fact, the first bulb to show green except the scillas and the lily mentioned above.

One great mistake we think we have made is in setting bulbs too deep.

It is said that pæonies should be only two or three inches below the soil, that the deep planting is the cause of much of the dissatisfaction expressed in regard to non-blooming.—ROSE SEELYE-MILLER in *Dakota Farmer*.

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THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.

Published Monthly by Madison Cooper, Calcium, New York.

Vol. III.

NOVEMBER, 1916

No. 11



GLADIOLUS—YELLOW HAMMER

It is described as a pure yellow and an extra strong grower. A faint carmine marking in the throat is noticed only on close inspection.

It is of good substance and chaste appearance, and is a splendid keeper in water as a cut flower. The photograph here shown was made from planting size corms.

The Gladiolus Manual.

BY W. W. WILMORE, JR.

CHAPTER XVI.

Growing Gladioli for Cut Flowers.

ONE of the greatest mistakes in growing Gladioli for cut flowers is that we do not select a variety of color that is sought for in the floral world. It is quite noticeable that almost any size and shape of flower will sell if the color is in demand. Pink is perhaps the best selling color, then red and the other colors according to the demand. Blotched and heavily marked varieties are as a rule poor sellers; clear, clean cut colors are always in demand.

The one greatest variety for cutting is *America*. This variety has put the Gladiolus in the cut flower market so to speak. Before the introduction of this grand pink, Gladioli were little thought of as a cut flower. We have another which is perhaps more beautiful than *America*, the well known *Panama*, but from my observations it will never take the place of *America* on account of its poor keeping qualities. It is the experience of all who have handled it as a cut flower that the petals take on a burned look at the edge shortly after it is cut. *Mrs. Francis King* is perhaps the leader in reds. We have several whites that are good, namely: *Lily Lehmann*, *Glory of Holland* and *Europa*. These can be grown for cutting at a profit whereas other varieties of the same color cannot be produced for the market price.

The varieties *Mrs. Frank Pendleton*, *Niagara*, *Golden King* and *Halley* are profitable and suitable cut flower varieties. *Pink Beauty* is valuable on account of its earliness but is soon discarded on the arrival of *Halley*, *Mrs. Francis King*, and *America*. There are many other good varieties suitable for cutting but the above list is perhaps as good as can be found. Odd and dark colors do not sell and newer varieties are too costly to use.

In planning the blooming season, *Pink Beauty*, if used, should be planted first, then *Halley*, then *Mrs. Francis King* and lastly, *America*. The plantings should be as near the same time as possible. Other varieties can then be planted. This rotation should be continuous at intervals of ten days, beginning as early as it is possible to work the soil in the spring until

first of June. This will give a succession of bloom from middle August until frost. *Pink Beauty*, however, should not be stretched over more than two plantings, because, as has been said before, it becomes a drug on the market as soon as the other varieties make an appearance.

In selecting corms for cut flower purposes only the best should be used, from virgin stock if possible, and $1\frac{1}{2}$ to 2 inches in diameter. They should be placed right side up in the trench and not over four to five inches deep, as they grow faster if not too deep in the cold soil.

If the corms are valuable, little foliage should be removed when cutting the flower spike. This can be done by inserting a knife in the stock very lightly, and bending the spike in opposite directions. This operation will sever it and then the spike can be slipped out of the leaves. If the spike is not needed with a long stem it can be cut out with one or two leaves without injury.

As to the price a well grown Gladiolus spike should sell at, depends upon the supply and demand and the cost of the corm. I will say from experience that on a large scale it costs one cent to grow and one cent to sell a Gladiolus spike of first quality. There are few corms we can buy for less than one cent, therefore, the standard varieties should not be sold for less than \$3.00 per 100 and novelties in proportion.

[Continued next month. Chap. XVII—"Shipping Corms and Cut Flowers."]

Golden Wedding and Gladioli.

Mr. and Mrs. T. L. Wagenseller, of Junction City, Kansas, celebrated their Golden Wedding on September 5th and a part of the very appropriate decorations consisted of Gladioli, Mr. Wagenseller having made the plantings especially for use as decorations for the occasion. Here is a suggestion for Golden Wedding which, however, do not often occur. Certainly there are plenty of beautiful golden yellow varieties of Gladioli available for such purpose.

How to Sell Your Surplus Flowers.

By JOSEPH H. SPERRY in *The Country Gentleman*.

AMATEUR gardeners often grow more flowers, just for the pleasure of cultivating them and seeing them grow, and bloom, than they really can use when they are cut.

Many kinds of these surplus flowers such as are borne on stems from four inches long and upward may be sold at satisfactory prices if properly marketed.

The flowers which amateurs will be able to sell the most readily are peonies, asters, centaureas—the blue cornflower—and also the imperial varieties of centaureas which produce yellow, white and lilac-colored blooms; delphiniums, tritomas, sweet peas, gladioli, lilies, dahlias, coreopsis, gaillardias, scabiosi, phlox, zinnias, marigolds, calendulas, cosmos, and the several different kinds of rambler roses.

The blooms of all these plants should be cut off with a sharp knife—not broken off—and placed at once in vases or pails of water. These receptacles should be set in a cool room where the air is pure, and in a position out of reach of the direct sunlight; a clean, cool, well-ventilated, dimly lighted cellar answers the purpose. The flowers should remain in water about three hours.

Flowers picked late in the afternoon may remain all night in water, though this is longer than necessary.

Very many flowers are tied in bunches before they are offered for sale. This may be done either before or after they have been put in water, usually before in the case of the smaller flowers, like sweet peas, but afterward if the flowers are large and borne on stout stems.

To make this bunching of flowers clear to all readers it should be stated that florists commonly speak of so many stems of sweet peas and similar flowers bearing two or more flowers at or near the top of an unbranched flower stem; so many branches of flowers such as cosmos, rambler roses and other flowers the branches of whose main stalks produce several flowers each; so many flower stalks of such flowers as Gladioli, lilies and tritomas, which produce along the upper part of their unbranched stalk several flowers, usually on short petioles; but in the case of such flowers as centaureas, coreopsis, zinnias, gaillardias and the like, which bear one blossom at the top of each stem, the florists speak not of stems or branches or stalks, but simply of so many flowers.

HOW TO MAKE THE BUNCHES.

With the foregoing explanation in mind the amateur will note that when properly prepared for sale sweet peas are tied in bunches of either twelve or twenty-five stems each; cosmos, rambler roses and the like, in bunches of either six or twelve branches each, according to the size of the branches; tritomas, delphiniums, gladioli and the like, in bunches of six or twelve stalks each; coreopsis, centaureas, peonies, zinnias, scabiosi and similar flowers, in bunches of twelve flowers each. I have tried to make very clear this matter of bunching flowers for sale, because it is just here that amateurs usually meet their Waterloo in preparing flowers for sale to either the retail or wholesale florist. The bunches are usually tied with green or brown raffia or with green or black number thirty spool cotton or common white twine. Sometimes rubber bands are used in bunching such flowers as sweet peas, but they are not very reliable.

There are three ways in which an amateur may dispose of his surplus flowers—first, direct to the person who is going to use them; second, to a retail florist; and third, to a wholesale florist. The first method is the best and the most profitable for the amateur, in the opinion of the writer, who as an amateur first became acquainted with the flower business and has tried all three ways of selling.

The amateur, perhaps, lives not far away from a stretch of seashore along which there are many cottages where people from the cities pass their summers. Again, he may be living within an easy drive or walk of one or more large hotels at some summer resort on lake or river or among the mountains. In either case he can, if he has some business tact, build up a profitable trade at these cottages or hotels. For this kind of trade he gathers his flowers in the late afternoon or in the early morning. It is better for sweet peas and such delicate flowers as are liable to be damaged by bruising to be picked when the night dew is on them, but with other types of flowers, such as gladioli and dahlias, it is immaterial whether they are picked in late afternoon or morning. Picking in the morning must be done early enough so that the flowers may drink and be bunched.

All things taken into consideration, it is

safer for the amateur to gather his flowers in late afternoon, since a night or morning rain may render the flowers unfit for picking. Indeed, in case of a threatening rain flowers may be gathered in early afternoon which would be damaged or ruined by a late afternoon rainstorm. The grower of outdoor flowers for market purposes must always have his weather eye open and use good judgment as to when to pick flowers, since so much depends upon the weather, which is not the case where flowers are grown under glass.

The bunches of flowers should be placed in an upright position in large, deep, lightweight, cross-handled baskets when they are to be taken to cottages or hotels and offered for sale to the cottagers or hotel guests or proprietors. Bunches of greens such as the branches of edible asparagus, sweet-scented geranium, lemon verbenas, or carrot or parsley leaves may be taken in a separate basket and sold to use with the flowers. The baskets of flowers should be covered with wax or tissue paper or thin muslin to keep off the dust and the sun's rays. If the locality where the flowers are to be sold is several miles from the amateur's home, a conveyance of some kind will be necessary; if only a short distance a basket of considerable capacity can be carried in each hand.

The most successful salesman, when this manner of disposing of flowers is adopted, is some wide-awake boy with pleasing address, still in his teens; but girls and women and men who have persistence and patience, and never-failing good nature and a desire to please, will succeed. The best time of day to sell flowers to summer cottagers or hotel guests is in the morning from about 8:30 to 10:30 o'clock, when they have finished breakfast but have not left their cottages or hotels on pleasure trips. Some years ago the writer with the aid of his young sons, when he was engaged in flower raising in a semiamateur, semicommercial way, built up a large and profitable flower trade at the cottages and hotels along the north shore of Long Island Sound.

SELLING THROUGH WHOLESALERS.

The second way of marketing is almost as good, if an arrangement can be made with a retail florist or florists in your own or a near-by town to buy your surplus flowers. You will probably have to sell to him at a lower price than when selling direct to the consumer, but this is not always the case, and it is less work to deliver your surplus flowers to one or more florists than to many cottage and hotel buyers. The florists would probably

arrange to have you make your deliveries in the morning before 8:30 o'clock.

The third way, selling to wholesalers, should not be attempted unless the amateur is producing a considerable and regular supply of flowers, as wholesale florists do not care to receive a small, undependable supply of flowers from anyone. If, on the other hand, the amateur flower grower can ship daily or several times a week regularly a considerable number of one kind or of each of several kinds of flowers to a wholesale florist in a city not far away, to sell for him on commission—the usual commission for selling being from 10% to 15%—this will be a very convenient way for the amateur to dispose of his surplus flowers.

The amateur in this case will pack his bunches of flowers in corrugated paper flower boxes, using those of such size as the bunches of flowers can be packed in to best advantage but never using boxes more than eight or ten inches deep. These boxes are first lined with two or three thicknesses of common newspaper, over which a single thickness of wax paper is laid. Then the bunches are laid in a row flat across the box, beginning at one end so that they lie lengthwise of the box; another row is then laid in across in the same way, so that the flowers in the bunches come just below the flowers of the first row, and so on until the other end of the box is reached; this layer is covered with wax paper, and a second layer is placed above it in a similar manner to the first, and so on till the box is filled.

The bunches of flowers should be packed closely to prevent their moving during transportation, but should not be crushed together; a thickness of wax paper should be laid above the top layer. Some growers use tissue instead of wax paper, but it is much inferior, since it takes the moisture from the flowers, whereas the wax paper conserves it.

Place a slip in each box stating the kind and number of flowers and by whom they are shipped. Place the cover on the box; tie it very securely; paste on the cover a label of generous size on which is written the name and address of the wholesaler to whom the flowers are consigned, your own name as shipper, and the words "Cut Flowers! Rush! No Delay!" or these words may be in red letters upon a separate label. Ship the boxes of flowers by the quickest route to the wholesale florist with whom you have made arrangements to receive your flowers.

Wholesalers much prefer to have their flowers arrive between 7 and 8:30 o'clock

in the morning, since they can then offer them for sale that same morning, a time of day when most buying takes place in the wholesale flower business. Flowers shipped to retail florists not in the amateur's own town should be packed and shipped in the same manner as to wholesalers.

Amateur flower growers are, more and more, selling their surplus flowers in one or another of the three ways described, and many have from this beginning grown into full-fledged commercial florists. The amateur will have to consider the circumstances which obtain in his case, and adopt that method for disposing of his flowers which best suits his conditions.

Sending Flowers by Mail.

How often we would like to send a few blossoms to friends at a distance, but do not know how to pack them so they will carry. While there is a way to pack them that will help to prevent their withering, the cutting and preparing for packing are more important if anything than the method of packing. If the flowers are not in the right condition to be packed no care will insure their arrival in good condition.

Flowers intended for sending away should be cut in the morning early before the sun has had a chance to disperse the dew. Place in vases of water in a cool place and let them remain there at least twelve hours to soak up as much water as they will. I always used pure clear water.

Almost any kind of a box that is large enough so the flowers will not be crowded will answer, but we need a supply of waxed paper. This paper is almost water proof. Line the box first with some ordinary paper, then with the wax paper. Now, if you want to finish it off nicely you will use a sheet or two of white tissue paper. Your box is ready for the flowers. If the flowers are only to be on the road a day or two it is seldom necessary to wrap the stems in any damp substance. I usually place the flowers carefully so the heads of the second row lie just under the first row, and the third row just below that, using the long stemmed flowers first. If it is thought best to have some moisture in the box more than the stems carry, take a white cloth and saturate it in clear water, wringing out until it is not drippy in the least, and raise the stems enough to slip it under them. Fold over them loosely, and if the flowers and their stems are delicate it is best to sew a cord down

through the bottom of the box to prevent the cloth forcing the heads of the flowers against the end of the box should it be thrown so it struck on the end of the box with the flowers down and the stems up. Fold the coverings in neatly, first the tissue, then the wax and finally the heavier lining.

The parcel post makes the sending of boxes of cut flowers an easy matter, and cheap. The only trouble is in getting a box that will not be crushed. I have sent plain flower boxes as far as the fourth zone without having the flowers injured in the least, and again I have had the boxes crushed in the limits of the first zone. A long slender box is apt to be doubled up in the middle. Corrugated boxes are safest, and they are so commonly used now for all purposes they ought not to be hard to obtain. Wrap the box well on the outside and put the label on the outside of this wrapping. Have the words "Fresh Flowers" very plainly marked so it can be seen.

In selecting the flowers that will bear shipping choose such as have good substance. Carnations or any of the pink family ship well. Roses are hard to keep fresh for a long journey, but if they were cut when but partially blown and have been placed in water until the petals and stems are full they will not be so badly wilted but they will revive even when shipped considerable distance. Shasta daisies, pansies, sweet peas, violets, Gladioli, tuberose, chrysanthemums can all be shipped reasonable distances. Flowers with silky texture that wilt easily at any time will not carry. There is little use in sending poppies, cannas, moon-flowers, or other flowers of like substance.—L. H. COBB in *Rural New Yorker*.

A Gladiolus Wedding.

Secretary Youell, of the American Gladiolus Society, reports in the *Florists' Exchange* a wedding where Gladiolus blooms were used exclusively. This was at the wedding of Miss Esther Wing Smith, daughter of Wing Smith, who has in past years been a member of the firm of Smith & Powell, large nurserymen of Syracuse, N. Y. Mr. Youell reports that pink and white Gladioli combined with lavender chiffon was used with good effect. We should have been glad to have reported the decorations more fully and it is hoped that Gladiolus weddings in future will be more common and we will certainly be glad to give full reports of same.

MRS. AUSTIN'S TALKS.

STORING BULBLETs—BULBS FOR CHRISTMAS GIFTS.

"My bulblets do not come through the soil evenly, but make a straggling growth all summer. Is it because of faulty storage?"

"Would it be wise to harvest now (late Sept.) stock grown from bulblets planted the last of May?"

"Are the little brown things bunched on the sides and bases of the bulbs of any value, if so what shall I do with them through the winter?"

As straws show which way the wind blows, so these inquiries from various parts of the country, prove that interest in the growing of Gladioli is greater than ever and that more space is devoted to the culture of the small cormels or bulblets. Where, a few years ago perhaps a dozen or two large bulbs were grown and then thrown away after blooming and "the little brown things bunched on the sides and bases of the bulbs" were thought worthless, a large part of the garden is especially devoted to the Gladiolus in its various sizes. The amateur is learning that when he has purchased a valuable variety whose bloom has been a delight, that after the flower is gone he may enjoy a repetition of it from bulbs grown from its bulblets. The flowers are not only as beautiful as the first one but possess an added interest because they are produced from bulblets from his own growing. The little black bulblets saved from my first collection of bulbs were of much interest to me, and fearing they might freeze even in our cellar I stored them in a paper bag behind the mirror in our warm sitting room where they dried all winter. Their failure to grow was a surprise and disappointment and the determination to know "why" led to special study of their culture. I very soon learned that if stored properly they would grow well in any good garden soil if planted in a sunny situation. They should be kept slightly damp, not wet, and in a cool place free from frost. If one has a few, perhaps a dozen or a teacup full, imbed them in two or three times their bulk in slightly moist soil in a box, a cigar box will do, and a temperature of 40° will be all right. Sand may be used instead of soil and is cleaner to handle. Storing large quantities is a different proposition for using either sand or soil is entirely

out of the question. One of the prettiest sights ever in our storage cellar was a heap of eighty bushels of *America* bulblets. After having been cleaned by running them through a fanning mill, they were sprinkled slightly and shoveled over several times to even the dampness and then spread in trays (illustrated in October number, 1915). The bulblets were nearly even with the top of the trays around the sides and ends but more shallow in the middle. The trays were piled one above the other, allowing air space between. We sold nearly all of them and received a number of letters telling us how quickly and evenly they had come through the soil and well they had grown.

Have you made plans for your Holiday gifts yet? Some people, especially the merchants and children, are counting the days now, and right here again is where the Gladiolus fits in. One wishes to give some token that is pleasing, yet inexpensive, and what better than a few bulbs neatly wrapped, labeled and in a pretty Xmas box or dainty basket? How much more pleasure both the winter and summer than in many of the small priced gifts. One enjoys looking at the plump brown bulbs, so full of mystery and beauty, and anticipating their bright coloring. He plans where they shall be grown in the garden, the particular spot he wants to brighten, looks up their requirements, studies the leaflet of instructions. In springtime when the "garden fever" comes the Xmas bulbs are the first to be planted, and he eagerly watches their growth. In fact, there is no end of pleasure in a 50c. or \$1.00 box of Gladiolus bulbs. Think about it.

MRS. A. H. AUSTIN.

Bushy Dahlias.

To effectually and unobtrusively stake the dahlia has ever been a serious garden problem. It can be done and is occasionally accomplished by the few who will do such tasks right or do them not at all. But few will stake the plants well and it may be pertinent to say at this point that they do not need staking if properly trained, and that proper training requires less time and money and gives better results. Alfred D. Robinson of Point Loma is known as an "expert amateur" dahlia grower and he merely pinches out the tips of the main stalk to secure a bushy, self-supporting plant. Then on each of the many leaders he takes off all side buds and therefore obtains dahlias eight or nine inches across.—ERNEST BRAUNTON in *Los Angeles Times*.

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Amateurs Should Sell.

There have been things said in the columns of THE MODERN GLADIOLUS GROWER about amateurs selling cut flowers and selling bulbs, and some people may have formed the idea that he who sells his product is not a true amateur. We think this discussion has been carried far enough to show, and we believe that authoritative sources have decided, that the selling of his product does not lose to the amateur his amateur status. It is, of course, understood that the amateur must be an amateur in fact and must sell only incidentally and not as a business.

However, what we really started out to say was that every grower both large and small should do his utmost to induce those who show an interest in the Gladiolus to grow them for themselves. This is most easily done perhaps by offering to sell them bulbs for their own growing. Amateurs should not be at all backward about offering their stock for sale at any time when customers present themselves. It will benefit the customer, and be to the benefit of the trade in general. The more small growers, the more business for those who grow commercially, and when the amateur disposes of some of his surplus, it gives him funds to purchase additional and improved varieties.

It is really the enthusiastic amateur to

whom commercial growers should look for the increasing popularity of the flower in which they specialize. Amateur growers should, therefore, receive the cordial support of professionals.

It is not often that a selection of varieties is ventured by people experienced in growing Gladioli. This month we print on page 160 an article by Secretary Youell of the American Gladiolus Society which appeared in the *Florists' Exchange*. While possibly some people will not agree with the dozen varieties selected, yet we are pleased to print Mr. Youell's article and invite comments.

One of our subscribers wants to know whether Gladiolus seed will grow well if carried over and planted the second year. Anyone who has had experience will confer a favor by letting us hear from them on this subject.

The Circulation Department has just called our attention to the fact that with the end of Volume III next month, December, 1916, there are an exceptionally large number of expiring subscriptions. We, therefore, take this opportunity of calling the attention of those whose subscriptions expire with the December, 1916, issue, to the fact, and ask their prompt renewal.

American Peony Society.

We are in receipt of Bulletin of Peony News No. 3, published by the American Peony Society and very kindly sent to us by the secretary, Prof. A. P. Saunders, Clinton, N. Y. This bulletin has some interesting reading in it for those who grow the Peony and it contains also a report of the proceedings of the society for 1916 including list of prize winners, etc. Secretary Saunders writes that a copy may be had by anyone interested by applying direct to him; also, that conditions of membership in the society will be given on application.



A DELPHINIUM (LARKSPUR) PHOTOGRAPH FROM WISCONSIN.

Those who do not grow Delphinium should try it another year. It does not occupy much space and is hardy.

Gladioli at Beverly, Mass.

Mr. H. B. Ellis, as President of the Agricultural Division, secured a great flower show for the annual Sam Sam Day which is held by the employees of the United Shoe Machinery Co., at Beverly, Mass. Mr. Ellis is a member of the American Gladiolus Society and an enthusiastic flower lover.

Gladioli were the center of attraction in the floral display and well known

amateurs and professionals made exhibits which brought out many favorable comments and won prizes as well. Prizes were offered in the color classes for both three and six spikes and a prize was also offered for the best ten varieties open to both amateurs and professionals.

Courses in Practical Floriculture at Cornell.

Practical courses in floriculture will be given from November 8, 1916, to February 16, 1917, at the New York State College of Agriculture at Cornell University in connection with the regular winter courses of the college. Since these are professional or business courses rather than academic ones there is no examination for admission. They are open to persons of 18 or more years of age.

It is stated that the course in floriculture has been made especially strong since New York is distinctly a flower growing state, because of the markets furnished by its large cities, which make the financial interests connected with floriculture in New York greater than in any other state in the union.

There are courses in greenhouse construction, for professional flower producers, and lectures, demonstrations, and laboratory exercises for amateur flower growers, together with a special course for men and women interested in the home flower garden.

In addition to the special floriculture courses students in this subject are also expected to take work in agricultural chemistry, plant breeding, soils, and injurious insects. Courses are available also in vegetable gardening, fruit growing, dairying, rural engineering, landscape art, forestry, farm management, farm crops, animal husbandry, and agricultural extension teaching.

Gladiolus—Mrs. Dr. Norton, Honored.

L. M. Gage, Natick, Mass., has been awarded a Silver Medal by the Massachusetts Horticultural Society for a vase of the new Kunderd seedling Gladiolus, *Mrs. Dr. Norton*. The exhibit was made at Horticultural Hall, Boston, on Saturday, Aug. 26th, and it so impressed the committee on plants and flowers that they gave it the award above stated. This variety is a magnificent flower of a delicate pink shading into yellow and has received several honors during the past season.

WAYSIDE RAMBLINGS.

SELLING CUT FLOWERS OF GLADIOLI.

TO THE EDITOR:—

In connection with an article in the September number of THE MODERN GLADIOLUS GROWER regarding the sale of cut flowers, I think, perhaps, my first experience may be helpful to other beginners.

In the spring of this year I purchased 2000 planting size bulbs, 1000 *Americas* and 1000 *Mrs. Francis King*, and from which I did not expect to get any flowers. With careful planting, cultivation and irrigation I produced fifty dozen salable spikes out of the 2000 bulbs.

Having no idea of prices or means of disposing of the spikes, I thought it best to cut a spike as a sample and canvass the wholesale florists for a market. The first florist I interviewed seemed well pleased with the sample and agreed to purchase all that I had, for which I received an average price of 25c. per dozen. After disposing of the fifty dozen spikes and deducting the price of the bulblets, I still had a balance of \$2.24 profit from my first endeavor, which I considered very good on account of the blooms coming at the time of the season when prices were very low.

I have since purchased another 2000 bulbs and find no difficulty in disposing of them as fast as they come into bloom.

I would add I have taken in as low as eight spikes at a time, and believe it is not as much a question of quantity available for sale as quality.

ORVILLE CLARK.

FALL PLANTING OF GLADIOLUS BULBLET.

On page 245 of *The Garden Magazine* for May, 1916, is an article on the fall planting of Gladiolus bulblets. My opinion is that a Gladiolus bulb or bulblet that freezes is dead. If the ground surrounding it freeze, it will also freeze. Of a bulb partly frozen, the unfrozen part may or may not grow the following season, according to whether or not it has a bud and a portion of the base uninjured.

If there is no danger from freezing, or they can be safely planted below the frost line, bulblets and young bulbs are as well (bulblets better) planted in the fall, or left in the ground without digging, as they get the advantage of earlier growth in the spring than would be possible from spring planting.

A bulb old enough to have a large dead bulb at its base will not grow well when left without digging, but should do well if dug, cleared of the dead bulb at its base, and replanted. The dead bulb at the base gives neither root-hold nor nourishment to the living bulb when it tries to start growth in the spring.

Gladiolus bulblets can lie dormant in the ground for a season and grow the next, and can be kept more than a year in cellar. I believe they may lie dormant in the soil for more than one season, and grow when conditions are favorable.—BENJAMIN C. AUTEN, in *Garden Magazine*.

SIX SPIKES OF BLOOM FROM SIX BULBS AT THE SAME TIME.

TO THE EDITOR:—

Commenting on the editorial in September number of THE MODERN GLADIOLUS GROWER, noting the winning of a prize on six spikes from six corms, would say, last spring I obtained from Mr. Kunderd six bulbs of *Mrs. Pendleton* which were planted May 25th. They grew five feet high and all came into flower together, the spikes being twenty-three inches long and the flowers five inches across. For over two weeks they were in prime condition and were indeed grand.

H. E. CHRISWELL.

Note by the Editor—

It is one thing to have six spikes of bloom from six bulbs at one time and quite another thing to have six spikes of bloom which were prize winners ready at a given date for a flower show. What has been done once can, of course, be done again and if anyone should duplicate the performance of the Editor this year we will be glad to give publicity to same.

"WARTY" GLADIOLUS BULBS.

What you say on page 146 of the October issue about ridged and wrinkled Gladiolus bulbs is noted with interest and my long experience might be helpful to other growers. Two years ago I had about one hundred that were very pronounced. These were planted to see what they would do. Not one of them bloomed but they all divided so that there were from three to eight small new bulbs on the old one. A part of these small bulbs bloomed last season and all produced good bulbs this year, and cannot see but what they have behaved as well as the average.

F. P. CLARK.

Best Twelve Gladioli for Commercial Use.

BY HENRY YUELL in *Florists' Exchange*.

TO NAME the best 12 Gladioli for commercial purposes is a difficult task, as the taste or fashion for certain colors differs in localities very widely. In some cities *America* is the only Gladiolus that is cared for; then again in a nearby place any good sized flower will sell, so the man who wishes to go into the business for the cut flower end of it should grow a good quantity of the best sized flowers. They are the ones that will always command attention.

Very often first cost is mostly considered, and the cheapest and poorest bulbs are bought. This is a great mistake. Far too many think they should get as much for their flowers as is paid for the bulbs the first season, forgetting that they have the bulbs and the increase, which in a few years will give them a very large stock and make them independent of market conditions.

I am firmly convinced it will pay to buy some of the more expensive varieties to grow on for future years, being very optimistic as to the future market for our products and believe firmly our trade is in its infancy. This opinion is based on personal observation of the vastly increasing sale of cut flowers and bulbs.

The whole State of New York has passed through one of the most trying seasons ever experienced, and although the flowers for the most part have been far below the average, the sale has been over 100 per cent larger than in any previous year. This proves beyond a doubt that the Gladiolus is becoming better understood and appreciated as a decorative flower. Its lasting qualities commend itself to growers, and the public each succeeding year will evince an increased demand for it.

The one great aim of every grower should be to grow the best large flowered varieties and not the cheap mixtures because they are cheap. These produce flowers that would disgrace the poorest cottage. We should all strive to educate the public to an appreciation of the best in everything. It costs little or no more to grow good stock than poor stock. The first will invariably find a market and the latter the dump.

The writer is very optimistic of the future also in the matter of selling the bulbs. I believe the conditions that have prevailed the last few years, of such vast quantities of foreign grown rubbish being

dumped upon our market will cease, and American growers will come into their own again.

PLACE YOUR ORDER FOR BULBS.

In submitting the best 12 varieties for commercial purposes the writer has purposely omitted the blues for the reason that their sale is very limited and they are poor keepers as well as weak growers.

It will be noted that for the most part the varieties named can be bought at little cost, but nevertheless they are all good. Those who contemplate buying should lose no time in making arrangements for doing so, as the tendency of the market is upward. There is every likelihood of a shortage of stock owing to the unfavorable season.

As an American I strongly advocate buying from our own growers and thus help those who contribute to the taxes of our country as well as benefiting the community in which they reside. The writer is well aware that this advice may be looked upon as pure sentimentality, but the time has come when there must be more cordial co-operation among our own growers and thus keep the wheels of prosperity turning. There are, of course, good new varieties raised in Holland that can only be purchased there, and it will pay to buy some if you can get them through some reliable house when you feel sure the stock will be true to name. The many complaints heard at the Boston show of diseased bulbs and mixed varieties from imported stock leads the writer to make these remarks.

THE CHOICE.

America, delicate lavender pink, one of the largest.

Augusta, white, light lavender stripes on lower petals, a fine florists' flower.

Mrs. Francis King, flame pink, very large flowers on strong spike.

Mrs. Frank Pendleton, one of the most beautiful of all, bright rose pink on white ground, large blotch of velvety carmine red on lower petals. Everyone should stock up with this variety.

Independence, very large deep rose pink, a splendid keeper.

Niagara, soft pale yellow, large open flowers, good seller and keeper.

Panama, beautiful deep pink, makes a splendid combination with *Niagara*, good keeper.

Peace, giant white, light lilac marking in the throat, flowers large on strong stems.

Pride of Goshen (ruffled), a giant flower and spike, salmon or flesh pink.

Kunderdi Glory (ruffled), creamy apricot, fine for designs.

Princeps, brightest scarlet, white markings on throat, very large flowers, good seller and keeper.

The King, rich deep old rose, blotch of red on white ground in the throat, very large open flowers.

The Canna.

No flower makes a better summer response to generous watering and fertilizing than cannas. They are rank growers and bloom very soon after planting. There are dwarf and tall ones, and, if one has a large garden, it is grand to make a large, round plot and put the tall ones in the middle and the dwarfs around the edge. Or, if one has a new home in a new garden, he can transplant cannas successfully in summer, and make a garden showing at once; and if the space is limited, he can keep them prominent only so long as slower growths are making. Such gross feeders and growers as cannas are making themselves generously despised sometimes by our esthetic people, but they do an invalid good, and are good for a pessimist, they are so splendid in the summer sun with their big leaves and gorgeous yellow and red blooms. There are pink and white cannas also, but they are not as startling in the landscape.

"Uncle Sam" is a grand tall canna with yellow-red blooms, and wonderful great light green leaves, red-edged. "Fire-bird" is a new dwarf canna with immense fire-red blooms. A canna grower tells of a bloom — inches across. King Humbert is another red-flowered, tall canna, with reddish-brown foliage. The better it is grown, the less green comes in the foliage, and its great dark leaves against the light green leaves of Uncle Sam are an invigorating contrast when the southern summer sun is endeavoring to burn everything yellow-brown. Kate Gray is almost as fine as Uncle Sam, if not quite, but is an old kind, and loved by all who grow it. The old Italia and Austria are wonderful yellows, if not made to face the sun full upon them. Planted near a tree and blooming in a tree, the roots get sun and feeding and the blooms not the sunburn. Cannas are summer friends that wear. We add new kinds, but keep the old kinds that are sure to inspire us to contend successfully with the summer sun.—*Suburban California*.

We would call attention to the fact that subscribers can still secure a complete file of THE MODERN GLADIOLUS GROWER from the very beginning. Recent subscribers who have not the issues of Volume I or Volume II can secure these back issues at the regular subscription rate of 75c. for a single year or \$1.50 for three years. We do not know how long our present supply of back issues will last and would recommend that anyone who wants a complete file should secure it while they can.

Statement of the Ownership, Management, Circulation, etc., required by the Act of Congress of August 24, 1912, of THE MODERN GLADIOLUS GROWER published monthly at Calcium, N. Y., for Oct. 1, 1916.

STATE OF NEW YORK }
COUNTY OF JEFFERSON } SS:

Before me, a Notary Public in and for the State and County aforesaid, personally appeared Madison Cooper, who, having been duly sworn according to law, deposes and says that he is the Owner of THE MODERN GLADIOLUS GROWER and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher—Madison Cooper, Calcium, N. Y.

Editor—Madison Cooper, Calcium, N. Y.

Managing Editor—Madison Cooper, Calcium, N. Y.

Business Manager—Madison Cooper, Calcium, N. Y.

2. That the owner is Madison Cooper, Calcium, N. Y.

3. That the known bondholders, mortgagees and other security holders owning or holding 1 per cent. or more of total amount of bonds, mortgages, or other securities are:

None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

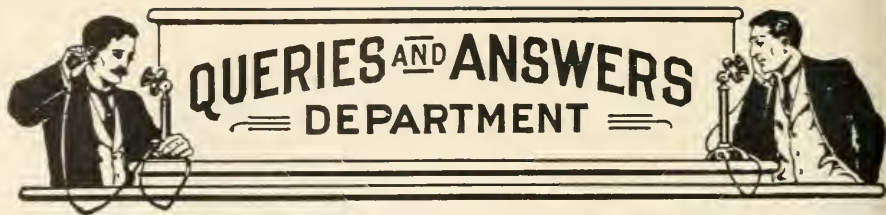
(Signed) MADISON COOPER.

Sworn to and subscribed before me this 26th day of Sept. 1916.

[Seal.]

(Signed) C. HOWARD GREEN.

(My commission expires April 1, 1917.)



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]—EDITOR.

Gladioli for Cut Flowers.

TO THE EDITOR:—

Will you give some information in regard to the growing of Gladioli for cut flowers for sale in Florida? I would like to know what they will bring and at what stage to cut them. R. N. R.
Cleveland, Tenn.

Answer:—Being unfamiliar with local conditions in Tennessee, I am unable to give definite information as to how Gladioli are grown in that section, though I should think methods necessary to success in the North would obtain there also. The first essential would be well ripened bulbs. In the North bulbs remain through the winter season in a dormant state. If planted without sufficient period of rest to complete the ripening period a large percentage will not produce flowers. Last winter a number of growers in this section planted *America* and *Mrs. King* about Dec. 15 in greenhouses, hoping to have very early flowers on the market. The bulbs used had been harvested about Oct. 15, and the two months which elapsed between these two dates were not sufficient to ripen the bulbs properly, and as a result they did not come into bloom much earlier than bulbs planted February 1, and only about 50 per cent of them made flowers. In planting in a warm country with the expectation of shipping the flowers to a Northern market care should be taken to see that they have had sufficient time in which to thoroughly ripen. If procured from the North or Holland they could safely be planted from the 1st to the 15th of February. The flowers from bulbs planted at that time would be on the market several months before the Northern-grown Gladioli.

The bulbs should be planted four to six inches deep in rows wide enough to allow the cultivation to be done with a horse, and six to eight inches apart in the rows, using soil that is well enriched and in a fine mechanical condition. If the plants make a tall growth it is well to support them in some way, or the wind will blow them over and cause crooked

stems. In cutting the spikes for market it is important that a part of the stem and several leaves be left on the bulb, or it will not mature properly.

Where Gladioli are to be shipped a long distance they should be cut with the two lower buds just showing color, and packed in corrugated pasteboard boxes in thin layers with wax paper between each layer. Care should be exercised in packing that too much pressure is not put on the flowering end of the stem. Prices of these Southern-grown Gladioli on the Northern markets vary considerably from season to season, and according to quality, though the average is from three cents to six cents each.—ELMER J. WEAVER in *Rural New Yorker*.

Saving Dahlia Seeds.

TO THE EDITOR:—

Could you give me a little information as to the methods used in gathering seed from Dahlias? Should all but the largest flowers be pulled off? Any other information you will be able to give on this subject would be appreciated. J. S. F., N.J.

Answer:—Single and semi-double varieties of Dahlias produce seeds most abundantly. The extremely double varieties as a rule do not produce seed, but sometimes a few seeds can be gathered from these. Though it may not be entirely necessary to remove all except the largest blooms from the plants, it will do no harm to follow out this procedure, and it will certainly be advisable to save seeds only from the large, well formed blooms. Seeds which have been saved may be planted in March in shallow boxes of soil, and transplanted as soon as large enough to handle into small pots or other boxes of soil, and shifted on until the dangers of frost have passed, when they may be set out in the open ground. They will produce blooms, usually in the autumn, and the grower will be able to make a selection from these seedlings and save the tubers of those which he considers desirable for next year's use.—*Florists' Exchange*.

Lime for Garden and Field.

It is unfortunate for our orchardists as well as for garden owners that no deposits of nearly pure calcium rock have been developed and the product placed on the market. For of all the forms of lime for correction of soil acidity and promotion of bacterial activity no other is so safe and pleasant to use as pulverized limestone; it is harmless in any quantity and reduces none of the organic matter in the soil as do the caustic compounds. There are some of the world's finest limestone deposits within a hundred miles of Los Angeles, and this has been known for years. But all are so remote from transportation lines as to cost too much for agricultural purposes. When this problem of economic moving is solved our orchards and gardens are in need of millions of tons, for none of our cultivated soils contain enough lime. In the meantime use all you can afford in air-slaked or hydrated form.—ERNEST BRAUNTON in *Los Angeles Times*.

F. P. Clark writes that putting a bunch of sphagnum moss in the bottom of a vase for cut flowers keeps the water pure and fresh for a long time. It would seem that if sphagnum moss could be freshly gathered that it is a fine suggestion, but whether the dried moss will do the same or not might be a question.

CLASSIFIED ADVERTISING.

Growers having surplus stock for sale will find this department effective in disposing of it. Five lines (about forty words) \$1.00 per insertion. Additional lines 15c. each.

SEND your name for a copy of our surplus list of the best Gladioli and Dahlias. We grow for the wholesale cut flower trade and have few varieties but they are the best of their color. Here is your opportunity to secure good stock for cut flowers at a low price. Delivery now or in spring. Oakland Gardens Nursery, Walled Lake, Oakland County, Michigan.

W. E. KIRCHHOFF CO., Pembroke, N. Y., growers of the finest Gladioli, such as Pendleton, Panama, Niagara, Pink Perfection, Europa, Mrs. Fryer, War, Peace, etc. Correspondence solicited.

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I had last year in buying good clean stock true to name and delivered to me on time I have made an iron clad rule that not a single bulb is to be sent out by me this year unless it was grown at

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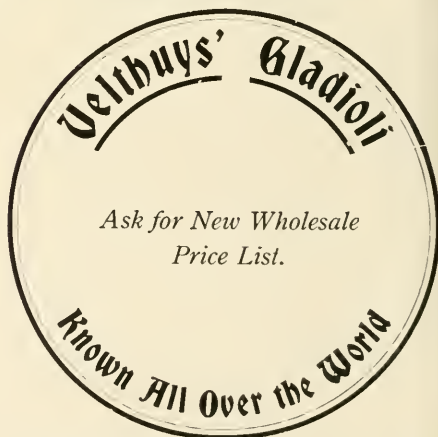
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THE MODERN GLADIOLUS GROWER

FOR BOTH AMATEURS AND PROFESSIONALS.

Published Monthly by Madison Cooper, Calcium, New York.

Vol. III.

DECEMBER, 1916

No. 12

GLADIOLUS— MRS. DR. NORTON.

Awarded First Class Certificate of Merit by American Gladiolus Society. (highest award) August, 1916. First Class Certificate of Merit by the Worcester Co. Horticultural Society, August, 1916. The Massachusetts Horticultural Society's Silver Medal, August 26th, 1916. Silver Medal of the Newport Garden Club and Newport Horticultural Society, Aug. 17, 1916.



DESCRIPTION.

(Ridgeway's color chart used)

Very large, well open flowers, well set on a tall, graceful spike, four to eight flowers in bloom at one time. Color, white, the edges suffused with soft La France Pink. The three lower petals have a blotch of sulphur yellow, stained at the base with fine specks of Tyrian pink. Strong and vigorous grower, and very free flowering.

A Summer in Our Garden.

MRS. GERTRUDE ELLIS SKINNER. AUSTIN, before Minnesota State Horticultural Society.

SUMMER in our garden begins with the arrival of the first seed catalogue in January, and closes the day before its arrival the next January. We may be short on flowers in our garden, but we are long on seed catalogues in our library. We do not believe in catalogue houses excepting seed catalogues. We find them more marvelous than the Arabian Nights, more imaginative than Baron Manchausen, and more alluring than a circus poster. We care not who steals the Mona Lisa so long as Salzer sends us pictures of his cabbages. The art gallery of the Louvre may be robbed of its masterpiece without awakening a pang in our breasts, if Dreer will only send us the pictures of those roses that bloom in the paint-shops of Philadelphia. Morgan may purchase the choicest collections of paintings in Europe and hide them from the public in his New York mansion, if May will send us pictures of watermelons, such as were never imagined by Raphael, Michael Angelo or Correggio.

While the world watches the struggle for the ownership of some great railway system, the control of some big trust, the development of some enormous enterprise, we watch for the arrival of the seed catalogue to see which artist can get the most cabbages in a field, the most melons on a cart, or make the corn look most like the big trees of Yosemite. Don't talk to us of the pleasures of bridge whist, it is not to be compared with the seed catalogue habit.

In the seed catalogue we mark all the things we are going to buy, we mark all the new things. There is the wonderberry, sweeter than the blueberry, with the fragrance of the pineapple and the lusciousness of the strawberry! We mark the Himalaya-berry—which grows thirty feet, sometimes sixty feet in a single season. Why, one catalogue told of a man who picked 3,833½ pounds of berries from a single vine, beside what his children ate. Our Himalaya vine grew four inches the first season and died the first winter. We

were glad it did. We did not want such a monster running over our garden. We wanted to raise other things.

But we did not lose faith in our catalogues. We believe what they say just as the small boy believes he will see a



Mrs. Gertrude Ellis Skinner among her Gladioli.

lion eat a man at the circus, because the billboard pictures him doing it.

If we ordered all the seeds we mark in the catalogue in January, we would require a township for a garden, a Rockefeller to finance it and an army to hoe it. We did not understand the purpose of a catalogue for a long time. A catalogue is a stimulus. It's like an oyster cocktail

before a dinner, a Scotch high-ball before the banquet and the singing before the sermon. Salzer knows no one ever raised such a crop of cabbages as he pictures or the world would be drowned in sauerkraut. If the Himalaya-berry bore as the catalogues say it does we should all be buried in jam. You horticulturists never expect to raise such an apple as Lindsay describes; if you did, they would be more valuable than the golden apples of Hesperides.

But when we get a catalogue we just naturally dream that what we shall raise will not only be as good but will excel the pictures. Alas, of such stuff are dreams made! We could not do our gardening without catalogues, but they are not true to life as we find it in our garden. We never got a catalogue that showed the striped bug on the cucumber, the slug on the rose bush, the louse on the aster, the cut worm on the phlox, the black bug on the syringa, the thousand and one pests, including the great American hen, the queen of the barnyard, but the Goth and vandal of the garden.

But the best part of summer in our garden is the work we do in winter. Then it is that our garden is most beautiful, for we work in the garden of imagination, where drouth does not blight, nor storms devastate, where the worm never cuts nor the bugs destroy. No dog ever uproots in the garden of imagination, nor doth the hen scratch. This is the perfect garden. Our golden glow blossoms in all of its auriferous splendor, the Oriental poppy is a barbaric blaze of glory, our roses are as fair as the tints of Aurora, the larkspur vies with the azure of heaven, the Gladioli are like a galaxy of butterflies and our lilies like those which put Solomon in the shade. Every flower is in its proper place to make harmony complete. There is not a jarring note of color in our garden in the winter time.

Then comes the spring in our garden, a time of faith, vigilance and hard work. Faith that the seed will grow, vigilance that it is planted deep enough and has the right conditions in which to grow. Vigilance against frost, weeds and insects. Planting, sowing, hoeing, transplanting, coaxing, hoping, expecting, working—we never do half that we planned to do in the spring-time—there are not enough days, and the days we have are too short.

Then comes summer, real summer in our garden. Then flowers begin to bloom, and our friends tell us they are lovely. But we see the flaws and errors. We feel almost guilty to have our garden praised, so many glaring faults and shortcomings

has it. The color scheme is wrong, there are false notes here and there. There are tall plants where short plants should be. There are spaces and breaks and again spots over-crowded. We water and hoe, train vines, prop plants and kill the bugs, but we know the weak spots in our garden and vow that next summer we shall remedy every mistake.

Then "summer in our garden" has an autumn. The garden is never so beautiful as when the first frost strikes it. Pillow-cases, sheets, shawls, aprons, coats and newspapers may for a brief time hold at bay the frost king, but he soon laughs at our efforts, crawls under the edges of the unsightly garments with which we protect our flowers, nips their petals, wilts their stems and blackens their leaves. We find them some morning hopelessly frozen. But the earth has ceased to give forth its aroma, the birds are winging southward, the waters of the brook run clear and cold, and the voice of the last cricket sounds lonesome in the land. We say to nature, "Work your will with our garden: the summer is over, and we are ready to plan for another season."

And what have we learned from the "summer in our garden?" That no one can be happy in his garden unless he works for the joy of the working. He who loves his work loves nature. To him his garden is a great cathedral, boundless as his wonder, a place of worship. Above him the dome ever changing in color and design, beautiful in sunshine or storm and thrice beautiful when studded with the eternal lamps of night. The walls are the trees, the vines and the shrubs, waving in the distant horizon and flinging their branches on the sky line, or close at hand where we hear the voice of the wind among the leaves.

A wondrous floor is the garden's cathedral of emerald green in the summer, sprinkled with flowers, of ermine whiteness in the winter, sparkling with the diamonds of frost. Its choir is the winds, the singing birds and the hum of insects. Its builder and maker is God. Man goeth to his garden in the springtime, and, behold, all is mystery. There is the mystery of life about him, in the flowing sap in the trees, the springing of the green grass, the awakening of the insect world, the hatching of the worm from the egg, the changing of the worm into the butterfly.

The seed the gardener holds in his hand is a mystery. He knows what it will produce, but why one phlox seed will produce a red blossom and another a

white is to him a miracle. He wonders at the prodigality of nature. In her economy, what is one or ten thousand seeds! She scatters them with lavish hand from ragweed, thistle or oak. If man could make but the single seed of the ragweed, he could make a world. The distance between a pansy and a planet is no greater than between man and a pansy. The gardener sees the same infinite care bestowed upon the lowest as upon the highest form of life, and he wonders at it. He looks into the face of a flower, scans the butterfly and notes the toadstool and sees that each is wonderful.

From the time he enters his garden in the springtime until he leaves it in the autumn, he will find a place and a time to worship in his cathedral. He enters it with the seed in his hand in the spring, and as he rakes away the ripened plants in the autumn he finds something still of the mystery of life. A puff-ball is before him, and he muses on its forming. The little puff-ball stands at one end of the scale of life and he, man, at the other, "close to the realm where angels have their birth, just on the boundary of the spirit land." From the things visible in our garden we learn of the things invisible, and strong the faith of him who kneeling in adoration of the growing plant looks from nature to nature's God and finds the peace which passeth understanding.

Our Gladioli in 1916.

We had out this season over six thousand—*Princeps*, *Panama*, *Mrs. Francis King*, *America*, *Augusta*, *Lily Lehmann*, *Niagara*, *Golden King*, *Scarlet Velvet*, in quantity, and several varieties in small numbers. It looks as if there would be a good percentage of double bulbs at harvest time. The *Lily Lehmann* has been the most beautiful this year—slightly tinted with pink at first, they turn snowy-white, with white stamens, and in form and color are as beautiful as a lily.

Augusta is a smaller blossom, and is tinted with lavender-pink. We planted a number of third-size bulbs of this variety, and they responded bravely, giving us a wealth of beautiful blossoms, as fine as were received from some first-size bulbs. *Augusta* is specially adapted for design work. We had never made a floral design of any kind, but achieved a beautiful wreath of *Augustas* this year by make-shift methods.

Mrs. Francis King is always to be depended upon, but we don't believe it will

stand up in a drouth as well as *Princeps*. These two reds are different in color, markings and habits of growth. *Mrs. Francis King* foliage grows erect; the *Princeps* sprawls. *Mrs. Francis King* has a brickly red tone; *Princeps* glows like a living coal. *Princeps* has given us our most satisfactory late blossoms.

The varieties of which we have just a few will be stored in paper sacks; the rest in barrels raised from the floor by a couple of bricks. The cormels will be rubbed off when the bulbs are dry, and will be kept in a box of dry sand until nearly planting time, when they will plump up if the sand is made slightly moist.

In putting away bulbs for the winter, mark everything plainly. If boxes are used, tack on the labels. If there are many cormels, put the name of the variety in a pill bottle, cork, and thrust into the box.

We made our first planting April 11th. Corms from this planting gave us our last blossoms today. *Lily Lehmann*, planted April 26th, gave the first blossoms July 12th, and the last on September 11th. The difference in blossoming was probably due to the difference in depth of planting. An occasional blossom buried deep has surprised us in several early-planted rows.

We know of no flower which gives the pleasure of the Gladiolus. They are not the best garden flower, but for cut flowers, to our mind, nothing can excel them.

To all who have Gladioli, we would say, keep your cormels, plant them early in sand, and you will find your bulbs greatly multiplied.—*Wallace's Farmer*.

Lifting and Dividing Bulbs.

Tulip and narcissus plants are perennial, and if given proper care and grown under suitable soil and climatic conditions will increase and multiply from year to year. The bulbs may remain in the ground two or three years or until the clumps begin to crowd. After blossoming in the spring from six to eight weeks should elapse to allow the foliage to die partially down, when the bulbs may be lifted with a spade or fork. Shake the soil from the roots and store the bulbs in a cool, shady place where they will ripen and cure. When the old leaves and roots are thoroughly dry they may be easily rubbed off and the clusters of bulbs divided. The bulbs may then be planted in the same manner as the original bulbs. In this way the stock may be increased in a few years.—*California Cultivator*.

MRS. AUSTIN'S TALKS.

GETTING READY FOR A NEW BEGINNING.

There's a large window over the sink and when I washed dishes there the first time (was it nearly thirty years ago) I am sure that I was looking out of the window more than at my work. With shade rolled high I gazed at the grand old elms and was awed by their stateliness. I peeped at the lone apple tree at the corner of the house rustling its foliage in promise of fruit and shade. A little farther on stood the sweet apple tree as if a sentinel at the gate of the garden. As I looked I began making plans for the future and thought some flowers in the garden would brighten it, and nearer where the fragrance would reach the window, should be a white lilac in contrast with the old purple, and there would be other smaller shrubs nearby and a row of hollyhocks across the driveway. I approved the large snowberry shrub at the north side, and the clumps of fine old paeonies, with rubrum lilies near the kitchen door. The house is on the crest and faces a wonderful view of hill and valley with the blue ridges of Pennsylvania in the distance. It was all new to me and I think I felt very much like a flower loving woman who, with eyes on the flowers, failed to notice the surrounding country until at the door when she exclaimed in breathless astonishment, "I came to see the flowers and here I am right at the top o' the world. How can you work with all this to look upon?" It was from the sink window that I saw the bloom from the first Gladiolus planted in our garden, and from there I saw the first row and not long after, the entire garden in gorgeous color such as I had never dreamed of, and from the doorway I saw meadow and grainfields changing into flowerfields. Others were attracted, loved them and purchased. We never had enough for the fast increasing demand, and with the added work the pleasure began to have a hint of burden. With some one to share the burden there would be pleasure to share also. We are now happy in the thought that flowers will still clothe the sloping fields and that Elm Hill Farm will be, perhaps, more than ever a home of Gladioli.

At our town place we will begin anew the growing of Gladioli. How different from our first beginning here with no knowledge of its culture or wonderful possibilities. We will take with us a few

thousand bulbs, some hand-hybridized seed, sorters, a few trays and our "Experience." It was experience that taught us to plant the bulbs in drills and ridge them as they grew, and that taught us how to cut the spikes, for when we cut them long we saw the bulbs were small and that those from which we cut them short were better than the ones on which the spikes were allowed to remain and produce seed. It was experience in the loss of a season's increase of bulblets that taught us that they should be, for best results, kept a trifle damp when in winter storage. We also learned something of the life of Gladiolus bulbs. That the best life is the second or third year from bulblet, (much depends on the first year's growth) and is generally the most productive of bulblets. While they may produce good spikes of bloom and large bulbs longer they usually divide into two, and the next season into from three to six bulbs, each of which may produce a spike but are more apt to come blind. Last season we had some large bulbs which, because of being grub eaten and some other troubles put them in the cull class, we did not offer for sale. These when planted divided into as many as four, each giving a good spike for cutting, and, of course, no bulblets to speak of. If planted again they would under good cultivation be quite likely to produce some bloom but not enough to pay for the trouble and expense of cultivation and if there should be bulblets they could hardly possess the vitality of those grown from younger bulbs.

The new seedling of wonderful size may be ours but once, the same bulb planted and given the best of cultivation may produce only an ordinary bloom, so we have learned from experience that it is advisable to have a test plot where new and unusual varieties may be grown under special supervision, and in our second beginning our work will be almost entirely the growing and testing of seedlings of our own and other growers. We hope to have more time for observation and study of traits, and to assist in the development of those that go to build up strong new varieties that will each possess some characteristic to distinguish it as an improvement over others and as worthy to be increased and disseminated at Elm Hill.

After trying several sizes of trays we know that the one most convenient and lightest to handle is best. Those we are taking with us are made of light wood seven-eighths inch stuff, 48 inches long, 18 inches wide and 4 inches deep. A

three cornered piece of wood is tacked to the bottom for air space. They can be stacked and will not take up much room and yet will hold a goodly number of bulbs.

MRS. A. H. AUSTIN.

Hardy Phlox.

Few perennial plants are more attractive than the herbaceous Phlox, with its brilliance and variety of color, and long season of bloom. Continuous bloom from July to October may be secured by planting a succession of varieties, and by cutting away the first flower trusses, others being produced later.

The Missouri Botanical Garden Bulletin for July gives a list of desirable varieties, which will furnish a useful guide for planting. This bulletin explains the hybrid origin of the modern varieties, two native American plants, *Phlox paniculata* and *P. maculata*, being the parents of most of the improved sorts. Their culture is simple. Abundant nourishment is required and the soil should be well prepared and worked for a depth of 18 inches or two feet, enriched with well-rotted manure. The manure is especially necessary in light sandy soil to conserve moisture but an excess in stiff, heavy soil seems congenial to fungus disease. Plants may be set two to three feet apart. In hot weather a mulching of well-decayed cow manure applied in June, is helpful, as the surface roots suffer, and moderate shade is also beneficial during the hottest part of the day. It is suggested that an eastern or western exposure is preferable to a border facing south. Clumps of Phlox should be divided every three or four years.

The list of Phlox grown at the Missouri Botanic Garden includes the following desirable varieties:

White—*Diadem*, dwarf; *Jeanne d'Arc*, large, late; *Mrs. Jenkins*, large, early, the best of all whites.

White, crimson center—*Albion*, red eye; *Bridesmaid*, pure white, large carmine center; *Henry Murger*, white, large red eye, best of the type.

Light pink—*Henry Royer*, dwarf, light rose; *Manzelbrunnen*, pink with white eye; *W. C. Eagan*, large flowers, one of the best.

Bright pink—*Bacchante*, rose with crimson eye; *Pantheon*, clear rose; *Rynstorm*, bright pink, very large trusses, best of the type.

Scarlet—*Danton*, scarlet with purple eye; *Siebold*, bright scarlet, one of the

best; *Henry Marcel*, pure red, with salmon shading.

Magenta and lavender—*Rosenberg*, bright reddish violet with red eye; *B. Comte*, brilliant purple; *Obergartner Wittig*, bright magenta with red eye, the best of the type.—*Rural New Yorker*.

How to Cut Roses.

There is a right and a wrong way to cut roses. The choice of the latter may seriously injure the blossom-producing properties of the plants, it is pointed out by specialists of the United States Department of Agriculture. This applies particularly, of course, to rose plants chosen and grown especially for cut-flower production. Such roses will be largely of the perpetual blooming sorts.

When a rose is cut from such plants—tea roses or other perpetual bloomers—only two or three eyes of the current season's growth of that branch should be left on the plant. This should give the roses very long stems. Succeeding blossoms should be cut close to the ground. It will seem like destroying the bush to take so much off it, but if the object is the production of roses, the cutting away of the surplus wood will attain the desired end.

If the spring pruning has not been sufficiently severe the plant is likely to have long, naked stalks and short stems to the flowers. With this character of growth only one or two strong leaf buds should be left on the branch when the flower is cut, so as to stimulate as much growth as possible from the base of the plant.

The greatest temptation to leave wood is where there are two or more buds on one branch, some being small when the terminal one is open. This temptation to follow a bad practice can be avoided by pinching off all side shoots after a bud has formed on the end of a branch. This prevents the formation of two or more buds on one stalk. This summer pruning will encourage additional blooms on varieties which bloom more than once a year.—*Weekly News Letter U. S. Dept. of Agriculture*.

Lily of the Valley.

Roots of Lily of the Valley are entirely hardy and as the clumps enlarge from year to year they make a finer display as the older they grow until they begin to crowd badly. Transplanting can be done most any time during the year, but preferably in the fall.

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Vol. III.

December, 1916

No. 12

What Soil and Other Cultural Conditions are Best for Gladioli ?

Tradition tells us that the best soil for Gladioli is a dry soil and by preference a medium sandy loam, and every grower, experienced professional or amateur tyro, accepts the tradition and endorses it.

Have other soils been tried? Very sparingly I think, though a wet soil has been condemned as a delusion and a snare. One of my neighbors tried planting in a wet soil a year ago and for his temerity dumped into the scrap heap a pot full of fine bulbs.

I knew all that, so when I was told that the only land available for a bunch of left-overs was a semi-bog of black earth, covered with water at that moment, I was in despair. But the manager of the nursery, who is an exceptionally well informed horticulturist, of wide and varied experience, assured me that he was certain that the bulbs would thrive in that soil, so I accepted his assurance, and into that black, wet, inhospitable looking bog, some of it little better than peat, went box after box of bulbs of various sizes as well as many bulblets.

Soon after their interment a heavy rain fell upon the earth, and pools of water above the rows washed away all my faith. I was sure they would rot—

but they did nothing of the sort. They reveled in the water. All through the growing season the plants were a joy—with their tall strong stalks and their rich green leaves, without so much as a hint of weakness—not a brown signal of distress in sight.

The blossoms took less time than usual to make their appearance, (the bulbs were not planted till the last week in June and came on rapidly), and were of the finest—large in size and bright in color.

And at harvesting? The bulbs had been given no fertilizer, not even a top-dressing, and I should have forgiven the plants had their product been undersized, but they were not. The new bulbs were large—exceptionally large—and the bulblets were exceptionally abundant and of exceptional size. As a whole the crop was of the sort to gladden the heart of a grower.

Of course we had an ideal season for growing Gladioli in Eastern Massachusetts this year—plenty of hot sunshine and plenty of rain, which made me think that an abundance of water was the most essential requisite for making good bulbs.

MONTAGUE CHAMBERLAIN.

Note by the Editor—

Growers in the Middle and Western

sections of the country find it difficult to understand how the Atlantic Coast has had plenty of rain this year as stated by Mr. Chamberlain, but such is a fact. From the Carolinas North to Maine the coast line has been well supplied, in fact, in some places deluged with rain, whereas inland the drought during July and August was combined with the excessive heat, the most severe ever experienced.

The soil which Mr. Chamberlain has found favorable for the production of fine bloom and strong bulbs under the climatic conditions experienced this year, might prove a complete failure during a season which was cold as well as wet.

We do not all agree that a sandy loam is the best soil for growing Gladioli. It may be the easiest to work and the earliest, but does it produce the best corms for fine bloom? It is our opinion that a rather strong clay loam will give the strongest corms and the best increase, although not favorable for working nor desirable for growing cut flowers.

Actual experience such as is recounted by Mr. Chamberlain is very valuable in connection with the growing of any particular crop. We hope to have more of such.

MADISON COOPER.

Help The Modern Gladiolus Grower.

Gladiolus growers who get out a catalogue will not only confer a personal favor on the editor, but also indirectly help themselves by mentioning THE MODERN GLADIOLUS GROWER and giving the name and address of the publisher. THE MODERN GLADIOLUS GROWER has doubtless done more to popularize the Gladiolus than any other one influence during recent years, and it is, therefore, entitled to the support of all growers, both large and small, and in every and any way that they can lend a hand. Say a good word for THE MODERN GLADIOLUS GROWER in your catalogue and don't forget to give the name and address of the publisher and the subscription price.

Advertise Your Stock.

Owing to hot weather and droughty conditions throughout the central and western part of this country the crop of Gladiolus corms is not a heavy one this year. Owing to war conditions in Europe, foreign shipments will be comparatively light this year. These two factors seem to portend a ready sale at fair prices for those who have good stock of meritorious varieties of Gladioli. Therefore, advertise your wares, and even though you have never done any advertising before, this is a good year to start the business of selling. The older growers need no urging to advertise but sometimes they need urging to continue advertising during the off season when no sales are to be made. Arguments for continuous advertising every month in the year are so obvious that they need not be urged.

Growers who want to increase their plantings this year must be prepared to pay higher prices than for several years past. There will be no bargain sales this year, that is quite certain.

Erroneous reports seem to have been given out as to the size and quality of the crop of Gladiolus corms which have been harvested throughout the Middle West and West. Mr. Kunderd reports that in Indiana they have had a favorable late growing season and have harvested a fine crop of well matured and well cured corms. The late fall with no killing frost until all digging was done has been favorable for good maturity. Certainly this year no one can complain of the weather experienced during the digging season.

We are glad to know that the growers in the West have been able to harvest a good crop. Certainly there will be a good market for them as reports from Holland indicate that stocks are not heavy there and there has been some advance in price.

Bound volumes of THE MODERN GLADIOLUS GROWER may be had from this office for \$1.25 each postage prepaid. See advertisement.

WAYSIDE RAMBLINGS.

DATES OF BLOOMING.

From time to time your pages have contained articles headed as above. To extend the blooming period, the view of the majority of writers is, "Divide your corms into as many lots as will give batches to plant every two or three weeks from the date of the first planting to the first week in June."

I have always doubted this advice so far as amateurs are concerned, however sound it may be for the market grower.

In looking through one of the volumes of the Journal of the Royal Horticultural Society, I came across a paper read before the R. H. S., on the 25th of August, 1891, by the Rev. H. H. D'ombrian, B. A., F. R. H. S., in which he said:

"I generally plant during the first or second week in March, according to the state of the ground. It is much better to defer it than to plant when the ground is sodden, not, I think, that it makes much difference as to their time of flowering, whether you plant early or late. There are certain kinds which are sure to come early whenever you plant, and other late blooming kinds refuse to bloom early, plant when you will. Now and then a single root of these may come out of its ordinary course, but, as a rule, they come true to time."

I am of the same opinion, and instead of advocating the planting of the same kinds on different dates, the amateur would be better advised to select early and late varieties. Large growers can no doubt follow the view of the majority, but the amateur does not grow for market, and if he desires to extend the flowering period he can do so by a judicious selection of varieties. In addition the growing on of some bulbets will give some later (though small) spikes. Further by growing a few seedlings every year still later blooms may be obtained.

This year my corms were planted early in March, my bulbets followed, and then last year's seedlings were planted out (from boxes) as soon as they were about six inches high. Perhaps the order of planting was due to shortage of labor, but the results bear out the experience of the Rev. D'ombrian quoted above.

At this date (Sept. 26th) I am still getting a few spikes from the two former such as *Oberammergau*, *Princess Victoria Louise* and *London*: the latter, by the way, had a fine spike on the 7th of August. Then my seedling bed gives me something

fresh nearly every day, and promises to do so for some time yet. I expect the dry spell we had early in the season accounts for some of the late flowers. It seems a little strange that I should be lifting (I started yesterday) my corms and yet still be able to have a nice bowl of blooms in the house.

I append a short list of varieties showing the dates of blooming in 1915 and 1916.

	1915		1916	
	Day	M.	Day	M.
Alice Tiplady	4	8	28	7
Berkshire	18	7	29	7
Baron J. Hulot	1	8	2	8
Brooklands	19	8	7	8
Bordeaux	11	7	24	7
Bleriot	2	8	10	8
Chicago White	20	7	22	7
California	27	7	4	8
Duke of Richmond	20	8	31	7
Early Sunrise	19	7	20	7
Emma Thursby	20	8	23	8
Empress of India	24	7	2	8
Electra	4	8	29	7
Gold Drop	5	8	1	8
Golden Gate	5	8	1	8
Golden West	26	7	31	7
Glory of Nordwijk	6	8	1	8
Golden King	7	8	31	7
Helen Goldman	5	8	1	8
Incontenable	20	7	26	7
Jean Dieulafoy	16	7	30	7
King of Gladioli	6	8	1	8
Karl Luz	6	8	6	8
Kunderdi Glory	12	8	3	8
La Nuit	4	8	1	8
Liebesfeuer	2	8	9	8
Lady F. Cecil	2	8	9	8
Myrtle	22	8	31	7
Mephistopheles	12	8	3	8
Marie Therese	24	7	31	7
Nezinscott	7	8	1	8
Negro Prince	4	8	10	8
Oberammergau (1914)	14	8	31	8
Peace	16	8	11	8
Panama	4	8	6	8
Phoebus			26	7
Salmon Excelsior	2	8	28	7
Sea Mouse	20	8	6	8
Safrano	10	8	19	8
Schwaben	20	8	7	8
Sweet Orna	28	7	9	8
Vivid	4	8	9	8

It will be borne in mind that the season in England in 1915 was a late one, and it may be taken that those varieties which flowered earlier than in 1916 were favored by position. The dates of flowering of some of the above varieties will be found on page 36 of volume 2 of THE MODERN GLADIOLUS GROWER. G. C.

Note by the Editor—

While what "G. C." has explained above is more or less correct—that a given variety is likely to bloom at about the same time regardless of whether planted early or late—yet we are impelled to explain what we consider the best method of planting in succession:

To get bloom covering the longest period, select for first planting those bulbs which have sprouted and reserve the more

dormant ones for later planting. Bear this rule in mind at the different times of planting. It is, of course, well understood that some varieties bloom much earlier than others, and by having both early and late varieties a longer period of bloom may be secured, but to insure bloom at any particular date like, for instance, exhibition time, a succession of planting is almost necessary if prime exhibition bloom is to be depended upon. In planting the corms which have sprouted in the first plantings, and the dormant corms in the later plantings the result desired of a long period of first class bloom is almost sure to be obtained.

WHAT SIZE OF CORMS FOR BEST BLOOMS?

Some growers criticise the planting of large corms and recommend the planting of medium size for best results. Speaking from my own experience covering a period of 20 years and with the product of many different growers, I find the best results in size of spikes, vigor of plant and all around satisfaction to my own ideals, is from corms ranging in size from 1" to 2½". I fertilize and cultivate assiduously and do not permit weeds or anything to interfere with the proper growth and productivity from start to finish.

J. F. B.

[It cannot be expected that corms much less than 1" in diameter from the average of different varieties will produce good flower spikes. Some varieties indeed, for instance, *America*, require corms 1¼" and larger in diameter to give a reasonably good flower spike. Then on the other hand, such varieties as *Mrs. Francis King* and *Mrs. Frank Pendleton* will throw a fine flower spike from corms even as small as ½" to ¾" in diameter. No rule can be laid down as to the size of the corms. There is a good deal of uncertainty connected with the matter, not only as to variation in varieties and size of corms but also variation in age of corms and whether grown under high culture or in a lean soil.—Ed.]

It would seem that those having surplus stocks of Gladiolus corms are going to find ready sale for them this year. Some growers report certain varieties already sold out. Those having a surplus should be in no hurry to dispose of them at low prices. It is a long time between now and planting time, and it is thought that all surplus will easily be in demand at good prices.

Some Essentials of Success with Dahlias.

Personal experience and observations in the gardens of successful growers of this flower emphasize the following cultural suggestions:

Plant Late.:—In the latitude of Washington, D. C., early set plants come into flower during midsummer, are the prey of aphids, tarnished plant bugs, and mildew; and fail to bloom satisfactorily. We plant from June 1 to July 1.

Plant in the open sun, as Dahlias do not bloom well in the shade. Allow only one shoot to grow, treating all later sprouts as weeds. When the fourth pair of leaves has formed pinch out the central bud, and seek to grow a low well branched plant. Stake firmly. Rooted cuttings often give better results than divided clumps.

Good results are had here on both sand and clay. If the soil is moderately fertile manure at planting time is not essential but when flowering begins mulch the plants with manure and straw. We trench our sandy soil deeply in the fall, working in sods and litter to decay and hold moisture and induce deep rooting. It is best not to water or force the growth in the early part of the season except that backward plants should be stimulated by manure water or a pinch of nitrate of soda.

To get the largest flowers and long stems disbud by removing the axillary flower buds and the side shoots for some distance below the flower.

Plant the best new varieties. There are so many that they cannot be listed, but the following are among the best: *Geisha*, *Hortulanus fiet*, *Bertha von Suttner*, *Rene Cayeaux*, *Bertram*, *Chatenay*, *The Quaker*, *Glory of Baarn*, *Countess of Lonsdale*, *President Tansill*.

W. A. ORTON.

Peonies and Iris from Seeds.

It may not be generally known that peony seeds are inclined to lie in the ground from one to three years before germinating, but this is stated to be the fact, and as it requires from three to five years for the plants to come to blooming size, the hybridizing of Peonies requires even more patience than hybridizing the Gladiolus.

Iris seeds will mostly grow the first year and plants will bloom the third year. There are some very beautiful seedling Iris being introduced now.

The Peony.

Paper Read Before the Lancaster County Florists' Club

By B. F. BARR.

EVERY one loves the Peony. Those who can recall the enthusiasm of their grandmothers over the old garden "Pineys" may well imagine the raptures of those old people were they to be brought in contact with the splendid Peonies of today. The old-fashioned Piney, Peony *Officinalis*, a native of Southern Europe, is rich in color, but of small size, fleeting duration and offensive odor. The early history of this Peony extends back many centuries intricately woven into a haze of superstition, allegory and myth.

In China it is said, the Tree Peony has been their chief pride and glory for 1400 years, prized by their emperors for the beauty and fragrance of the flowers and for more than a thousand years a record of the new introductions, their characters, qualities and parentage have been kept.

The Japanese, too, are largely instrumental in producing our finest varieties of Tree Peonies, of which there are now a dozen or more choice varieties offered for sale. The blooms are large and keep well either on the plant or when cut and placed in water. They should be grown more extensively. They can be propagated from soft wood cutting but because of their slow growth they are usually grafted. Great care must be taken that shoots do not develop from the roots when grafted plants are used, lest the variety be lost and only a wild variety take its place.

The modern Peony of today or Peony *Sinensis*, the species we have before us tonight, the most popular has only been cultivated in Europe a little more than a half century. It is descended from Peony *Albiflora*, a native of Siberia.

The modern Peony is an aristocrat whose birth was among the nobility of France, for it was under the care of M. Jacques, gardener for King Louis Philippe, that some of the first of the fine varieties of today were originated. There were also Comte de Cussy, the Prince De Salm Dyck, and Modeste Guerin, all enthusiastic amateurs who secured the best varieties from Japan and China about the middle of the last century, and from these began to raise seedlings that have given us some of our present magnificent varieties.

M. Jacques' collection was inherited by his nephew, M. Victor Verdier, who raised a number of fine seedlings; Comte de

Cussy's collection was inherited by M. Calot, which later passed into the hands of M. Crousse. The Calot-Crousse varieties are noted for their uniform high quality, raising the standard of excellence that has never been surpassed.

Another enthusiastic French amateur was M. Nechin, whose grandson, M. A. Dessert succeeds him, and is considered one of the greatest living authorities on Peonies.

In America, three amateurs have been especially prominent in the production of new Peonies, namely: John Richardson of Dorchester, Mass.; H. A. Terry of Crescent, Ia., and George H. Hollis of South Weymouth, Mass.

In the propagation of Peonies or the raising of seedlings there is no road to quick results. It takes four to six years before blooms may be had from seed and from thousands of seedlings, less than one per cent. will merit the distinction of a name for introduction as a new variety. It takes many more years to increase the stock by the slow process of division sufficiently to be able to offer it to the trade. The plants may be divided by three every three or four years. Is it any wonder that good new varieties are listed for \$5 to \$25 each? New varieties are mostly introduced by amateurs. The professional florist or nurseryman can scarcely afford to wait so long for results, except where they have been raised for the love for something new and the fascination of watching them grow.

It is to be regretted that in a collection of Peonies contributed from nearly all over the world, containing nearly 3000 names, there are less than 300 distinct varieties, the other names all being duplicate or inferior varieties that cannot be traced to any known origin. The nomenclature committee of the American Peony Society was formed for the purpose of trying to straighten out this mess. *Edulis Supurba*, that splendid variety, nearly always in bloom for Memorial Day, was masquerading under some thirty different names, and so on.

For twenty-three successive Junes, I have studied and lived among Peonies, but a hundred years is far too short to know them as I would wish. A glance through the various catalogs of today proves the fact that varieties introduced 100 or more years ago are still among the

rarest and most high priced sorts, due to their slow multiplication and strong demand.

Peonies may be planted any time from August until late in the Fall or early Spring. September is the best time, however, as they will make a root growth before Winter sets in and they will bloom the following Spring. Not until the third year after they are planted will they produce perfect flowers. They require less care after planting than other flowers. They will grow and thrive for years without being disturbed. I have seen them grow without any care whatever, but they will abundantly repay good care and nourishment. They should be planted $3\frac{1}{2}$ ft. to 4 ft. apart in good garden soil and be surface mulched with manure in the Fall. They may be used in excellent taste among shrubbery or among other hardy perennials, as single clumps or large beds in the lawn, bordering drives or broad landscape effects, thriving everywhere whether in full sun or partial shade. As a cut flower nothing is more suitable for weddings, church decorations and social functions. Without the Peony we would be at a great loss on Memorial Day, just as we would be without Chrysanthemums at Thanksgiving.

I will endeavor to name a few of the most popular varieties: Red and Crimson—*M. Martin Coluzae*, *Cherry Hill*, *Plutarch*, *Adolphe Rousseau*, *Decandolle*, *Rubra Suburba*, *Mme. Bauvuet*, *Edouard Andra*, *Atrosanguinea*, *George Washington*, *Liberty*.

Pink and Rose Varieties—*Clair Dubois*, *Mme. Balot*, *M. Jules Elie*, *Lamartine*, *Eugene Verdier*, *Gloire de Gombault*, *Lady Beresford*, *Lady Lenora Bramwell*, *Georgiana*, *Shaylor*, *Alexandre Dumas*, *Albert Crousse*, *Cameron*, *La Coquette*, *Wilhelmina*, *Souv. de l'Exposition de Lille*, *Princess Beatrice*, *Edulus Suburba*, *Felix Crousse*.

White and Delicate Tinted Varieties—*Festiva Maxima*, *Couronne d'Or*, *Duchess de Nemours*, *Albatra*, *Duc. de Wellington*, *La Tulipe*, *Mme. Calot*, *Mme. Crousse*, *Mme. Emile Lemoine*, *Queen Victoria*, *Solfatare*, *Golden Harvest*, *Marie Lemoine*.

Most of the above varieties are suitable for cut flowers and a portion of which will bloom early, midseason, and late.

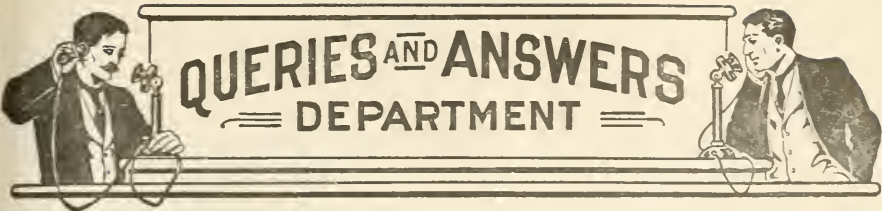
The variety, *Willy Wigman* when well grown is admittedly a fine thing, but different correspondents tell the same story, that it tends to rust in the foliage and gives a very weak flower spike. Our result is about the same as this, but on the other hand, *Wigman* is worth trying for even though it is not extra strong and robust.

Mutations of the Dahlia.

At most of the shows this season the peony-flowered section, although of but recent recognition, seems to be taking the precedence in the novelties presented, the number of exhibits and in public interest and admiration, supplanting to a considerable extent the cactus varieties, lately so popular, as well as the older show, fancy, pompon and single sorts. How long the big, dashing peony-like blooms will retain their prestige is a question depending much upon the good sense of the introducers and the conservative attitude of the societies under whose auspices awards are made. The dahlia, in common with the peony, chrysanthemum, Gladiolus and many other things which have been the subjects of much special breeding, has suffered and is suffering from the unreasonable multiplication of named varieties. There have been thousands of dahlias named where even hundreds would have been an overdose. Here is where the latest idol—the colossal peony-flowered type, will need and should be given protection, for, with the present tendency away from exact specifications of form and other determinable qualities and the absence of arbitrary standards, anything monstrous or fantastic can now get into the running and such can naturally be produced ad infinitum. A resolute weeding out of the old time lists and unsparing sifting of new candidates would seem to be the American Dahlia Society's foremost duty.—*Horticulture*.

As mentioned last month, there are an unusually large number of subscriptions which expire with this, the December, 1916, issue. This is because it is the end of the volume and also because it is the end of the three year subscription period. Subscribers are aware that postal regulations do not allow us to continue to send after subscriptions expire except on definite order. Those whose subscriptions expire with December have already been notified and if they have not already renewed, it is hoped that this reminder will bring their renewals.

Mr. W. J. Colcleugh, of California, writes that he had bloom of *Mrs. Francis King* and *Alice Carey* last year on Christmas Day. In response to an inquiry he replies that for bloom on Christmas Day he planted during the month of August. Here is a suggestion for Southern California growers: certainly winter bloom would be a valuable thing. With the right kind of corms we see no reason why this result cannot be had.



[This department of THE MODERN GLADIOLUS GROWER is intended to be one of its most helpful and valuable features. All questions asked in good faith and which are of general interest will have careful attention. The full name and address of the writer must be given, but not for publication.]-EDITOR.

Keeping Cormels Over Winter.

TO THE EDITOR:-

I am a subscriber to your magazine and I would like to have you give me full description concerning the keeping of Gladiolus bulblets over the winter so that they will quickly grow when planted out in the spring. I have difficulty in getting some of them to sprout. This fall when digging my bulbs I found some just beginning to grow.

W. J. B.

Answer:-The storing of Gladiolus cormels (bulblets) from digging time to planting time is one of the most important problems which confront the Gladiolus grower, either the amateur or the professional. The professionals solve the problem more readily than the amateurs as they have better facilities and give more time and attention to the matter.

After digging the sooner cormels are put into large bulk like bags, barrels, boxes or tubs, the better they will keep, and the higher percentage of germination will be secured. Cormels should not be allowed to dry out to any considerable extent. Large growers at digging time separate the cormels from the corms by brushing or rubbing them over a screen which will allow the cormels to pass through. This does not take long and as the corms should be dried and cured while the cormels should be maintained in a moist condition, the quicker this work is done after digging the better. For the amateur the cormels may be stored in tin cans or glass jars or any other convenient tight package. While the condition should be moist, they should not be wet, and they should be examined from time to time to be sure that they are not molding. Stirring and airing them at frequent intervals will prevent this.

It must not be expected that a very high percentage of germination of cormels can be secured on the average. Some varieties have cormels of extraordinarily strong vitality, and it seems that practically every one of them will germinate; while of others not more than 50%, sometimes very much less than this, are able to start growth. The objective point in storing is to keep the

cormels moist and yet not wet enough to mold and this is best secured by storing them in rather large bulk rather than in receptacles or packages which allow a circulation of air. Of course the storing place may be more or less damp or dry and exact statements are, therefore, difficult, but by bearing in mind the principles above outlined, the best conditions obtainable by any individual grower can be secured.

Even with the best of storage, the average germination of bulblets will scarcely be over 75%, possibly less than this.

When to Divide and Reset Perennials.

TO THE EDITOR:-

Will you kindly inform me whether in your judgment it is always safe in this part of the country to divide and reset peony and German iris roots? Have lived in South Dakota practically all my life and generally your late summers and falls are dry and I have always contended that it was more practical to transplant everything in the spring. Will you let me know the difference between the two dahlias—*Delice* and *Sylvia*?

Answer:-I have become pretty well convinced from my own experience that the time for dividing perennials of nearly all kinds should depend upon the character of the season. I would not put them out in a dry and forbidding soil even if it was at the orthodox time of year for the work to be done. I should wait for reasonably favorable conditions, even if fall setting was thereby entirely skipped. Of course, there are very few years here in eastern Minnesota when we would be entirely cut out of fall setting in this way. And then, of course, there is the opportunity of furnishing moisture by irrigation.

The *Sylvia* and *Delice* belong to the decorative class of dahlias, and are similar in form. I am not sufficiently familiar with the latter to give you the exact difference between them. They are both pink, and the *Sylvia* has always been one of the healthiest and best plants among our collection of dahlias.—CLARENCE WEDGE in *The Farmer*.

Flowers, Animals and Men.

The organization of a society for the preservation of wild flowers seems the apt expression of an age which has determined to regard nothing living as alien to it. We have reached a period of human history in which man finally recognizes his oneness with the great tribe of life and is willing to receive all growing and sentient things into his protection and care. It is from this standpoint that he deplors the unregulated slaughter of the seal, the commercialized pursuit of the whale, the persecution of the American bison, the extermination of the dodo, the great auk, the solitaire, the Eskimo curlew, the Labrador duck and the Carolina parakeet. The cry already goes up that the American flamingo, the scarlet ibis, the upland plover, the egret, sage grouse, heathhen and at least twenty other beautiful American birds are in danger of extinction. And now comes the turn of the flowers, for the arbutus or "mayflower" is disappearing, the moccasin flower shrinks away from sight, and unless the new society can prevent it we shall soon see the last of the cardinal flower, the Christmas fern, the partridge berry and the white pond lily.

If animals can have their rescue leagues and birds their Audubon societies, why should not "The Wild Flower Preservation Society of America" campaign against "the vandalistic plucking of flowers"? All these organizations deserve encouragement and support. It is impossible to estimate adequately the result of their work in terms of human uplift. We need more rather than less of it. But if a "higher intelligence" from some more favored planet were to visit us just now his commendation of that work would be tempered by reflections. He would notice that we were in the midst of a great war, and would observe with surprise that we were extending to the creatures below us protection which we refuse to the members of our own kind. What we offer to the gaze of such a visitor is the spectacle of the whole resources of our science devoted to the slaughter of our fellow men. His report back to Mars or to some world in the parish of Arcturus would infallibly contain the declaration that we were at cross purposes with ourselves and had not yet risen to the rank of reasonable beings. And that report might very well conclude with the statement that when our race puts into the work of preventing men from killing and mutilating each other only half of the organized energy it now devotes to seeing that animals are not

starved, that organ grinders are kind to their monkeys, and that hot plates are not used for the training of dancing bears, he will be the first to acknowledge that we have squared our practices with our sentiments.—*Boston Herald.*

How Lime Benefits Flowering Plants and Lawns.

To the lover of flowers and rich foliage plants, we present to such in the introduction of Ground Limestone for the soil a new interest in the growing of such plants. The application of lime to the soil produces a wonder revelation in the rich, deep colored petal of the flower and the dark, rich green color of the foliage of the plants. The flowers by their added brilliancy appear to be an improved variety. The flowers when cut will not wilt down like those grown on soil deficient in lime.

All plants appear to take on a new life in such improved soil. And the effect of all fertilizer on the newly limed soil is soon noticeable, which is not the case in an acid soil. The best foreground and background for the display of beautiful flowering plants with their rich foliage is a beautiful lawn. Such a lawn cannot be had upon a soil deficient in lime. The grass on such soil presents a slender, limp growth of flat green color, with moss growing around its roots impoverishing its growth. Apply ground limestone to such soil at the rate of two tons per acre and notice the result in a short time. The grass will not shoot up like a weed, but the lawn will become of a dark blue-green color. The blades of the grass will widen out from its base and become stiff and stout and vigorous. The moss will begin to turn a light yellow and in three weeks it has about all disappeared. When the lawn is in this condition any fertilizer placed upon the soil is soon very noticeable. The lawn mower will clip this improved grass more smoothly and evenly than ever before, for the reason that the blades of grass stand more erect and are stiff and tender, and easily cut.—HENRY BUCEY in *Northwest Horticulturist Dairyman*.

H. E. Meader, Gladiolus Hybridist DOVER, N. H.

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